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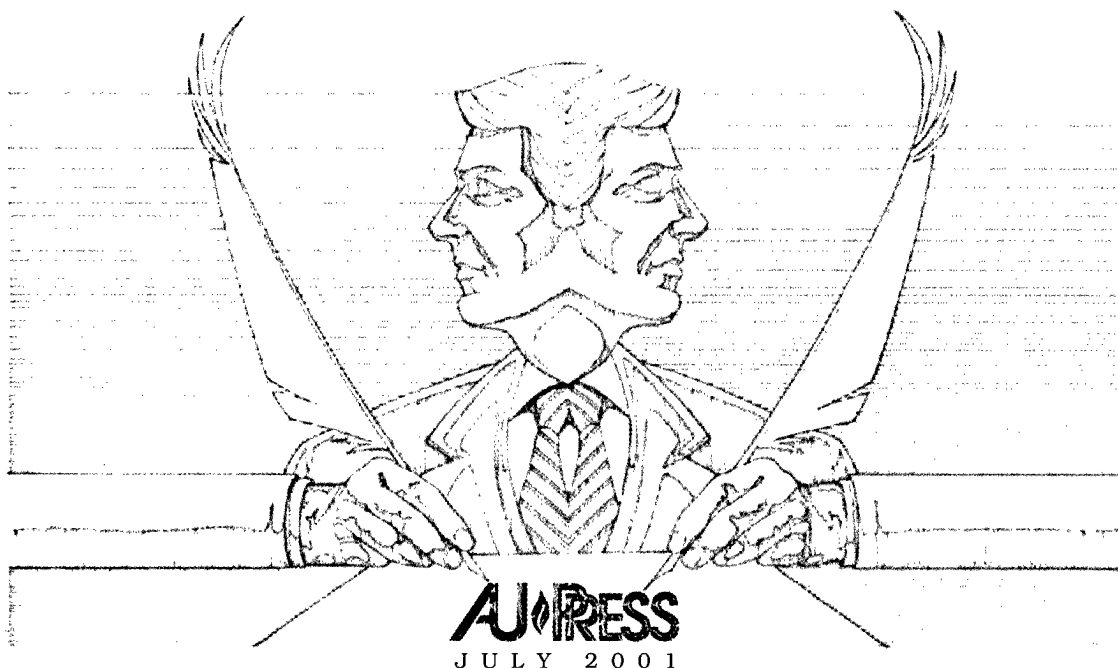
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AIR UNIVERSITY PRESS

AU Press publishes books, monographs, and occasional papers, and provides publishing support to the US Air Force's professional journal—the *Aerospace Power Journal*, which is printed in English, Portuguese, and Spanish. Our publications program is designed primarily to help Air Force and other US war fighters, national leaders and policy makers, academicians, military historians, and other analysts understand and apply air and space power in peacetime and conflict. These publications are the results of unique research by military authors and civilian scholars.

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JAMES B. CANNELL AWARD

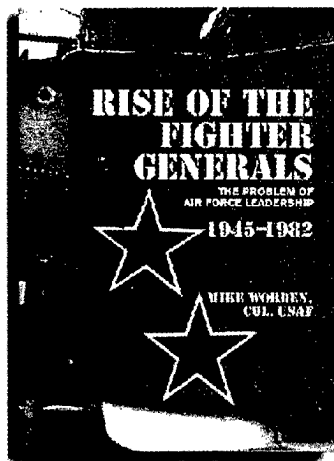
Each year the Air Force Historical Foundation presented the Col James B. Cannell Memorial Award to the author of the best research study produced by a command-sponsored research fellow. Selection was based on the depth and breadth of the research; quality of presentation, organization, and writing skill; and interest and importance to the Air Force. The report selected for the award was published as a book. This program was discontinued in 1994.

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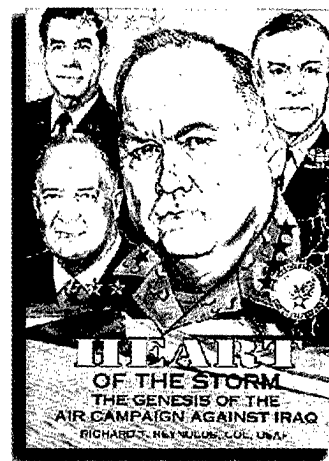
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B-51



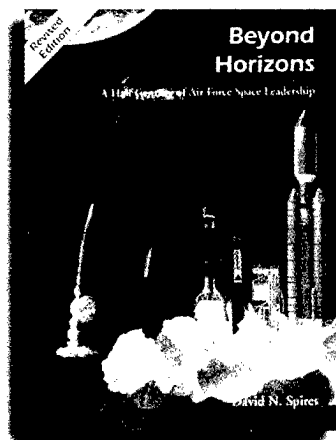
**Officer Intermediate
List**

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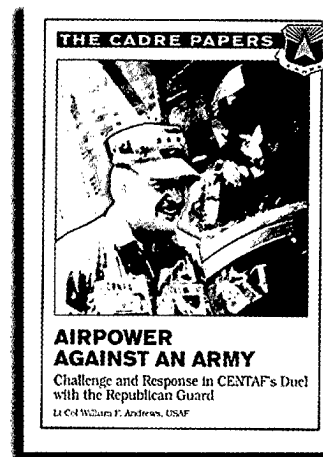
Officer Basic List

B-63



**Officer Intermediate
List**

P-2



**Officer Advanced
List**

BOOKS

Major works on subjects of broad interest and lasting importance throughout the Department of Defense.

Inside the Cold War: A Cold Warrior's Reflections

Chris Adams

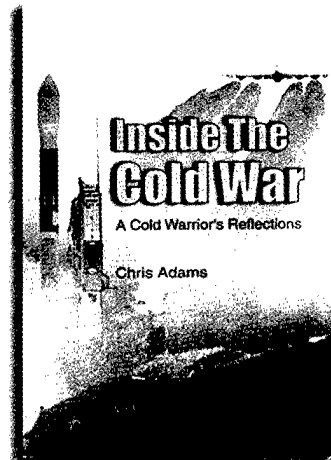
Maj Gen Chris Adams, USAF, Retired, reflects on his experiences in the cold war, during which he served in both manned bombers and missile silos. He tells stories of famous and not-so-famous cold warriors, including some from the US Navy. Some stories are humorous; some stories are tragic. Having traveled extensively in Russia and some former Soviet Union states after retirement, General Adams tells us about his former adversaries, the Soviet cold warriors. In the process, he leaves no doubt about his respect for all who served so valiantly in the "Strategic Triad"—the Strategic Command, the ICBM force, and the Submarine Navy.

1999. 195 pages. Public release.

B-72

ISBN 1-58566-068-X

\$14.00



Future War: An Assessment of Aerospace Campaigns in 2010

Jeffery R. Barnett

Colonel Barnett compares the next 15 years to the 15 years between World Wars I and II. He concludes that the changes between the two world wars may be dwarfed by those occurring within the next decade and one-half. He envisions possible wars with niche competitors and peer competitors, giving theoretical scenarios of each. Colonel Barnett views communications technology and stealth technology as keys to victory in future war.

1996. 196 pages. Public release.

B-5

ISBN 1-58566-004-3

\$12.00



They Served Here: Thirty-Three Maxwell Men

Jeffrey C. Benton

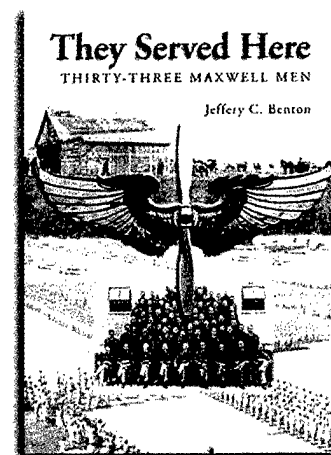
Colonel Benton provides a glimpse of the history of Maxwell Air Force Base by highlighting the careers of 33 airmen who served at the base at some point in their military careers. Some of the individuals portrayed were pioneers in the development of airpower and provided military leadership from World War II to the present. Others such as Glenn Miller, Clark Gable, and Bill Stribling were notable for their accomplishments in other fields. The stories told here highlight the critical, close interrelationships between the military and local society.

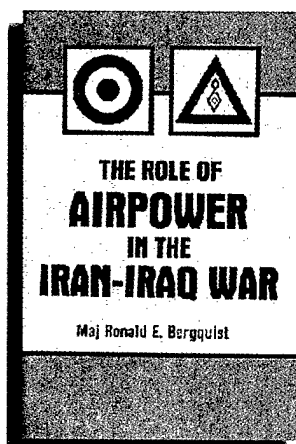
1999. 89 pages. Public release.

B-71

ISBN 1-58566-074-4

\$7.50





The Role of Airpower in the Iran-Iraq War

Ronald E. Bergquist

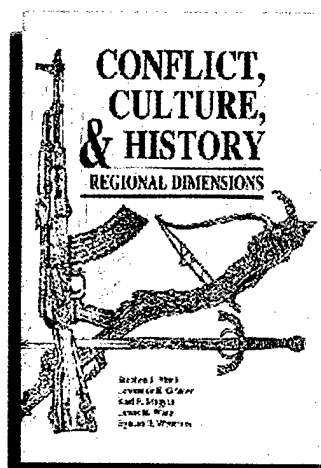
This book examines the air war between Iran and Iraq. Rather than simply describing what happened in the war, it attempts to discern why Iran and Iraq used their airpower as they did. It shows how the combatants value airpower, what aspects of airpower appear most important to Iranian and Iraqi national leaders, and how their values and needs led them to use airpower in ways quite apart from Western professional expectations. The results highlight considerations that affect the use of airpower by third world nations.

1988. 108 pages. Public release.

B-25

ISBN 1-58566-023-X

\$3.75



Conflict, Culture, and History: Regional Dimensions

Stephen J. Blank et al.

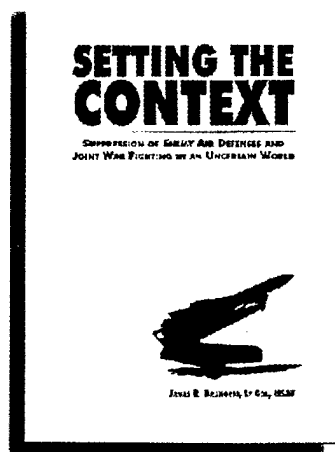
Five specialists examine the historical relationship of culture and conflict in various regional societies. The authors use Adda B. Bozeman's theories on conflict and culture as the basis for their analyses of the causes, nature, and conduct of war and conflict in the Soviet Union, the Middle East, Sinic Asia (China, Japan, and Vietnam), Latin America, and Africa. Drs. Blank, Lawrence Grinter, Karl P. Magyar, Lewis B. Ware, and Bynum E. Weathers conclude that non-Western cultures and societies do not reject war but look at violence and conflict as a normal and legitimate aspect of sociopolitical behavior.

1992. 370 pages. Public release.

B-45

ISBN 1-58566-043-4

\$17.00



Setting the Context: Suppression of Enemy Air Defenses and Joint War Fighting in an Uncertain World

James R. Brungess

Colonel Brungess proposes using joint suppression of enemy air defenses (JSEAD) to address the problem of reduced SEAD resources available to individual services. He contends that the demise of the Soviet Union presents the perfect transitional period for SEAD planners to create new approaches to countering the information-based integrated air defense system nets. He looks at the foundations and evolution of SEAD, identifies pertinent variables, and shows how they have changed. Colonel Brungess concludes that fiscal reality demands that the services forge joint SEAD tactics and doctrine.

1992 Cannell winner.

1994. 244 pages. Public release.

B-54

ISBN 1-58566-051-5

\$15.00

Kenneth N. Walker: Airpower's Untempered Crusader

Martha Byrd

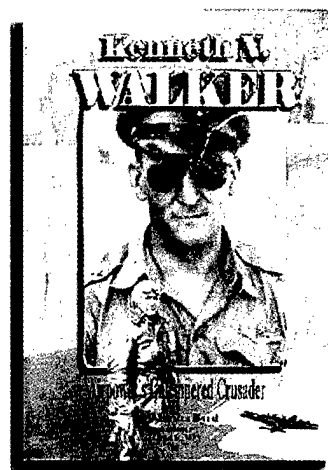
This biography of Brig Gen Kenneth N. Walker provides an in-depth look at the career of one of airpower's pioneer thinkers. Martha Byrd traces Walker's emergence from one of the early converts to airpower to his role as a key player in the formation of strategic bombardment doctrine. Her look at his performance in the Southwest Pacific theater during World War II gives us a deep insight into Walker's place in history as an innovator in the employment of airpower. Byrd not only highlights Walker's accomplishments but also provides a look at his often stormy relationships with fellow officers and in his personal life.

1997. 242 pages. Public release.

B-22

ISBN 1-58566-020-5

\$15.00



Airland Combat: An Organization for Joint Warfare

Thomas A. Cardwell III

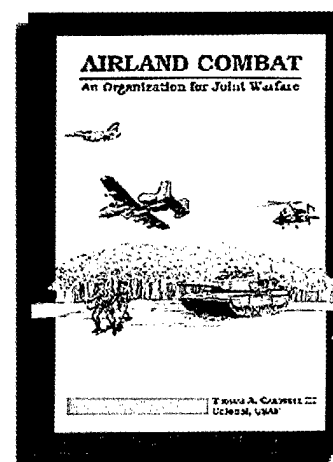
The author traces the development of airland combat strategy from the World War II era through the Korean and the Vietnam wars and outlines current thinking about unified command structure. Colonel Cardwell analyzes Army AirLand Battle doctrine, Air Force doctrine on tactical air operations, naval doctrine for supporting land warfare, and joint doctrine for unified operations. He examines the process for working joint issues and proposes a joint organization for airland combat.

1992. 289 pages. Public release.

B-47

ISBN 1-58566-045-0

\$13.00



Airhead Operations—Where AMC Delivers the Linchpin of Rapid Force Projection

John L. Cirafici

Colonel Cirafici reviews airhead activity in contingencies during World War II and in Operations Urgent Fury, Just Cause, Desert Shield/Storm and Restore Hope. He examines the newly activated Air Mobility Command (AMC) structure within the theater and discusses the Somali civil war to illustrate how airhead's air mobility forces fit into the overall scheme of force deployment, reassembly, employment, and sustainment. Colonel Cirafici identifies some problems and needed improvements and recommends that AMC look beyond past successes and provide greater effort toward training and exercises to promote jointness at all operational levels.

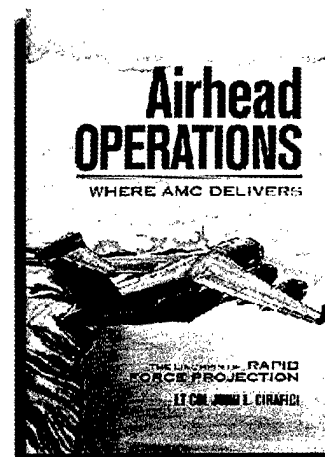
1994 Cannell winner.

1995. 109 pages. Public release.

B-60

ISBN 1-58566-057-4

\$6.50





**Architects of American Air Supremacy:
Gen Hap Arnold and
Dr. Theodore von Kármán**

Dik A. Daso

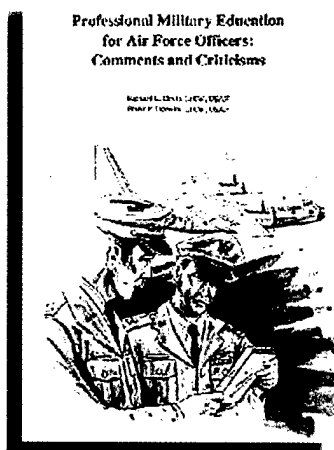
Major Daso tells the story of the founding of the scientific and technological base of today's US Air Force. He explains how Henry H. "Hap" Arnold and Theodore von Kármán ensured that theoretical science rather than empiricism grew to dominate Air Force research and development infrastructure. This story shows how personalities drive actions, institutions reflect personalities, and the interaction of these factors influenced, and continue to mold, the evolution of American air supremacy.

1997. 487 pages. Public release.

B-44

ISBN 1-58566-042-6

\$28.00



**Professional Military Education for Air Force
Officers: Comments and Criticisms**

Richard L. Davis

Frank P. Donnini

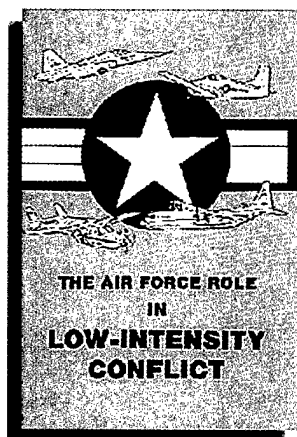
This book surveys the many evaluations made between 1946 and 1987 of the Air University's attempts to provide effective professional military education (PME) for US Air Force officers. Colonels Davis and Donnini discuss the purpose of PME from a USAF perspective and trace the evolution of Air Force PME and the curricula of the AU schools. The authors also offer observations about the education of officers, particularly with regard to commentary that has gradually evolved and may be styled a "doctrine" of PME.

1991. 136 pages. Public release.

B-41

ISBN 1-58566-039-6

\$9.00



The Air Force Role in Low-Intensity Conflict

David J. Dean

Colonel Dean examines the increasing importance of third world countries in global affairs. Their vital natural resources and geostrategic locations make them the object of intense competition between the superpowers and a ripe target for a new category of conflict. Because of the high probability of US involvement in third world conflicts, we must adapt our resources to acquire the flexibility demanded by low-intensity conflict.

1986. 143 pages. Public release.

B-16

ISBN 1-58566-014-0

\$4.00

Beyond the Paths of Heaven: The Emergence of Space Power Thought

Bruce M. DeBlois, editor

Major issues have plagued the US military space community for years. Foremost among these issues is the relationship between air and space. This work is a comprehensive examination of space power. Military space-lift vehicle requirements, space architectures, and ground support infrastructure are major issues. Graduate students at the School of Advanced Airpower Studies researched and discussed a variety of these issues and their efforts are brought together here as a collection of master's degree research theses. The significance of this book lies in the synergism of the contributions. Although each of the articles reflects varying, well-documented, independent perspectives with both strengths and weaknesses, in total, the articles give a mature summary of the best available military thought regarding space power. The first three papers examine space organization, doctrine, and architecture. The rest are loosely grouped as predominantly sanctuary/survivability, space control, or high-ground perspectives.

1999. 572 pages. Public release.

B-70

ISBN 1-58566-067-1

\$40.00

ANZUS in Revision: Changing Defense Features of Australia and New Zealand in the Mid-1980s

Frank P. Donnini

Colonel Donnini provides analysis and commentary on the demise of the ANZUS alliance and on shifts in Australian and New Zealand defense features. He addresses many questions and issues dealing with changing the political situation and the impact of those changes on defense and security conditions in the South and Southwest Pacific regions.

1991. 219 pages. Public release.

B-39

ISBN 1-58566-037-X

\$14.00

Making Strategy: An Introduction to National Security Processes and Problems

Dennis M. Drew
Donald M. Snow

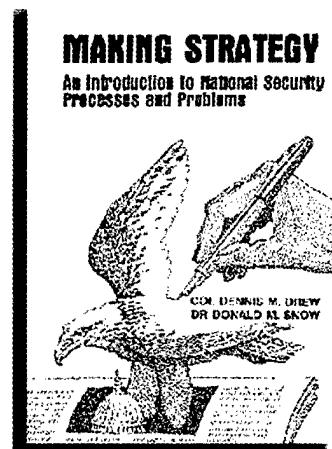
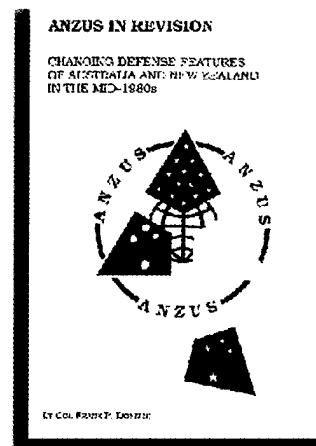
The authors analyze the evolution of strategy and the process by which strategy is devised. This book is descriptive rather than prescriptive in nature. In contrast to authors who offer advice and counsel concerning how to make strategy decisions, Dr. Snow and Colonel Drew concentrate on what decisions military and political leaders must make. The authors examine the various military and political factors that influence those decisions.

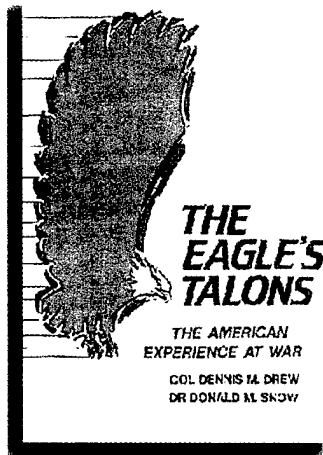
1988. 229 pages. Public release.

B-23

ISBN 1-58566-021-3

\$10.00





The Eagle's Talons: The American Experience at War

Dennis M. Drew
Donald M. Snow

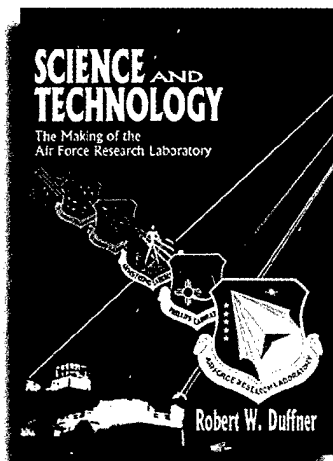
This volume surveys the American experience in war with emphasis on the complex interactions between political and military affairs. Colonel Drew and Dr. Snow provide a key to understanding how and why the United States might employ its military power in the future.

1988. 445 pages. Public release.

B-27

ISBN 1-58566-025-6

\$16.00



Science and Technology: The Making of the Air Force Research Laboratory

Robert W. Duffner

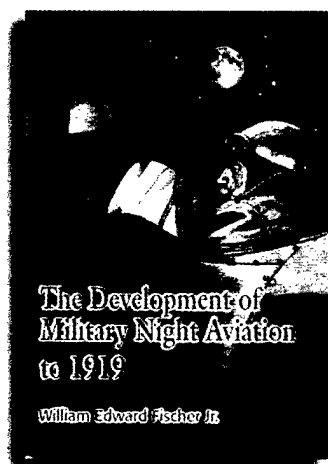
Robert W. Duffner's *Science and Technology: The Making of the Air Force Research Laboratory* addresses the far-reaching implications of science and technology by recounting the events that led to the creation of a single Air Force laboratory. This engaging story of how the Air Force moved from 13 separate labs to one consolidated lab reflects that service's determination to reinvigorate its science and technology infrastructure and thereby strengthen the nation's defense for the twenty-first century. Part one considers why the Air Force decided to consolidate its far-flung science and technology enterprise into one lab, while part two relates how the service implemented the new lab. Dr. Duffner offers a unique perspective on a watershed event in the life of the United States Air Force.

2000. 328 pages. Public release.

B-77

ISBN 1-58566-085-X

\$27.00



The Development of Military Night Aviation to 1919

William Edward Fischer Jr.

Major Fischer examines the development of military night aviation from its origins through the First World War. Emphasis is on the evolution of night flying in those countries that fought on the Western Front, namely France, Germany, Great Britain, and the United States. While night flying occurred in other theaters, the most intense air effort was clearly in the west. There, belligerents pressed aviation technology and tactics to the limit. To illustrate the rapid development of night military aviation during the First World War, the author surveys the state of night flying prior to August 1914. The author concludes that the Western Front belligerents failed to appreciate and conserve the lessons of night flying learned during the First World War.

1998. 172 pages. Public release.

B-66

ISBN 1-58566-064-7

\$11.00

Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907-1960, Volume I

Robert Frank Futrell

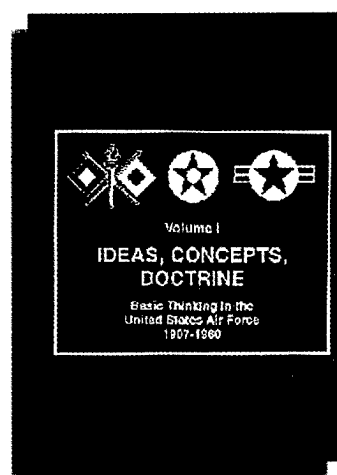
In this first of a two-volume study, Dr. Futrell presents a chronological survey of the development of Air Force doctrine and thinking from the beginnings of powered flight to the onset of the space age. He outlines the struggle of early aviation enthusiasts to gain acceptance of the airplane as a weapon and win combat-arm status for the Army Air Service (later the Army Air Corps and Army Air Force). He surveys the development of airpower doctrine during the 1930s and World War II and outlines the emergence of the autonomous US Air Force in the postwar period. Futrell brings this first volume to a close with discussions of the changes in Air Force thinking and doctrine necessitated by the emergence of the intercontinental missile, the beginnings of space exploration and weapon systems, and the growing threat of limited conflicts resulting from the Communist challenge of wars of liberation.

1989. 683 pages. Public release.

B-31

ISBN 1-58566-029-9

\$31.00



Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1961-1984, Volume II

Robert Frank Futrell

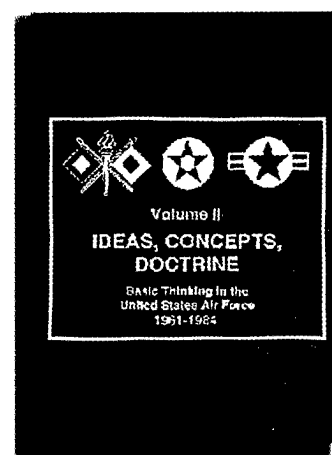
In this volume, the author traces the new directions that Air Force strategy, policies, and thinking took during the Kennedy administration, the Vietnam War, and the post-Vietnam period. Futrell outlines how the Air Force struggled with President Kennedy's redefinition of national security policy and Robert S. McNamara's managerial style as secretary of defense. He describes how the Air Force argued that airpower should be used during the war in Southeast Asia. He chronicles the evolution of doctrine and organization regarding strategic, tactical, and airlift capabilities and the impact that the aerospace environment and technology had on Air Force thinking and doctrine.

1989. 803 pages. Public release.

B-32

ISBN 1-58566-030-2

\$37.00



The Air War in Southeast Asia: Case Studies of Selected Campaigns

Herman L. Gilster

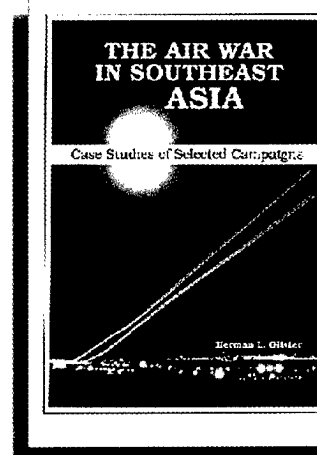
The author subjects five case studies of interdiction, close air support, and strategic bombardment to rigid analysis. Dr. Gilster shows the relationship between the strike effort and target damage of several air campaigns during the Vietnam War.

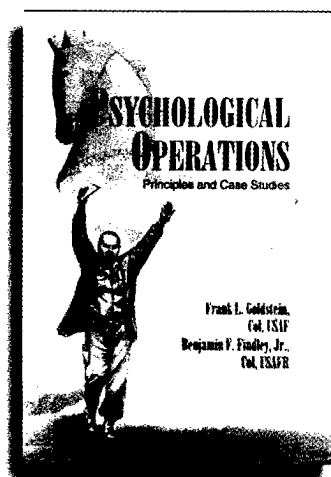
1993. 152 pages. Public release.

B-52

ISBN 1-58566-049-3

\$8.50





Psychological Operations: Principles and Case Studies

Frank L. Goldstein and Benjamin F. Findley Jr.

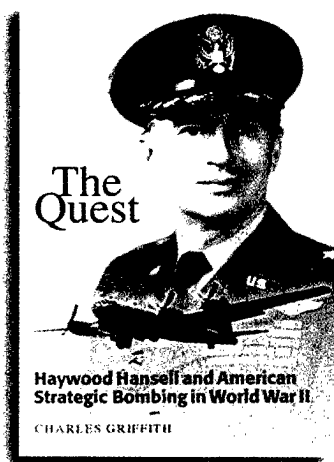
This volume comprises 25 independent essays on military psychological operations. These essays are arranged in four sections: (1) Nature and Scope; (2) Policy and Planning; (3) Strategy, Tactics, and Operations; and (4) Case Studies. The authors make a strong case for the strengthening of PSYOPs in all aspects of US military operations. Among their recommendations is that psychological operations should be included in all phases of military training and professional military education.

1996. 376 pages. Public release.

B-18

ISBN 1-58566-016-7

\$21.00



The Quest: Haywood Hansell and American Strategic Bombing in World War II

Charles Griffith

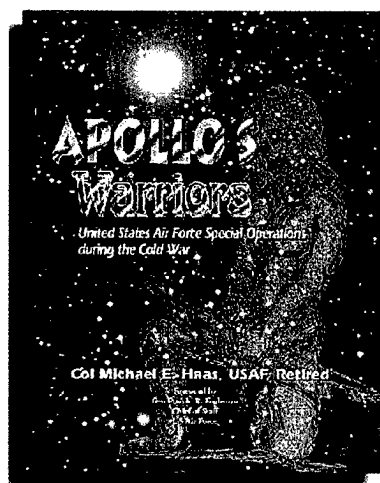
This biography of Maj Gen Haywood S. Hansell Jr. provides an in-depth look at the life and career of one of airpower's pioneer thinkers. Hansell's professional life was devoted to the theory and practice of strategic airpower—the single most controversial military debate of the twentieth century. Hansell believed that wars could and should be won through precision bombing of military and industrial/commercial targets, a theory and practice that the US Army Air Forces abandoned during World War II because of the dictates of existing technology, the demands of combat, and the fact that the passions of war swept away moral concerns involving strategic bombing. Nevertheless, Hansell's main contribution to air doctrine was the concept that through selective targeting and an ability to place the bombs on those targets, airpower could win wars by crippling an enemy's ability to supply his forces and without causing wanton death and destruction.

1999. 238 pages. Public release.

B-73

ISBN 1-58566-069-8

\$16.00



Apollo's Warriors: United States Air Force Special Operations during the Cold War

Michael E. Haas, USAF

The author relates the exploits of the US Air Force's unconventional warriors who flew and fought for over a quarter of a century in a shadowy war that was out of the public eye. He uses interviews and recently declassified sources to describe the bravery and resourcefulness of these warriors in 26 chapters arranged in three sections: (1) Korea, (2) Covert War, and (3) the Second Indochina War. To add to the attractiveness of this publication are over 200 color and black-and-white photographs depicting people and activities involved in this little-known aspect of the cold war.

1997. 369 pages. Public release.

B-37

ISBN 1-58566-035-3

\$28.00

Listening Effectively

John A. Kline

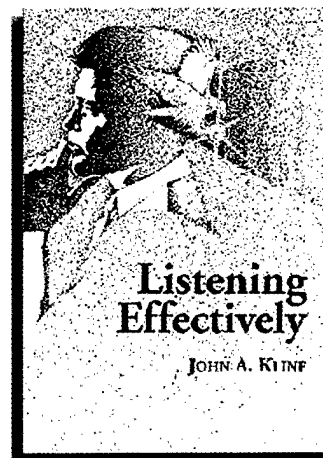
Dr. Kline introduces the reader to the need for better listening. He discusses six fallacies about listening: (1) Listening Is Not *My* Problem; (2) Listening and Hearing Are the Same; (3) Good Readers Are Good Listeners; (4) Smarter People Are Better Listeners; (5) Listening Improves with Age; and (6) Listening Skills Are Difficult to Learn. He describes the process of listening and the types of listening. Using the concepts of what we think, feel, and do about listening, Dr. Kline tells the reader how to listen more effectively.

1996. 70 pages. Public release.

B-10

ISBN 1-58566-009-4

\$4.25



Speaking Effectively: A Guide for Air Force Speakers

John A. Kline

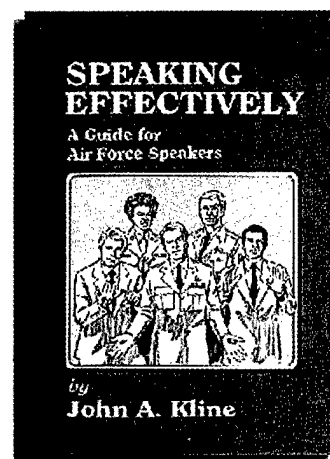
Dr. Kline offers advice to help people develop the skills needed for speaking in public. The keys to being a good, confident speaker are preparation, organization, support, and delivery. He describes briefings, lectures, and speeches and discusses their differences. Dr. Kline provides examples and pointers for both the novice and the skilled speaker.

1989. 86 pages. Public release.

B-33

ISBN 1-58566-031-0

\$5.00



Mosquitoes to Wolves: The Evolution of the Airborne Forward Air Controller

Gary Robert Lester

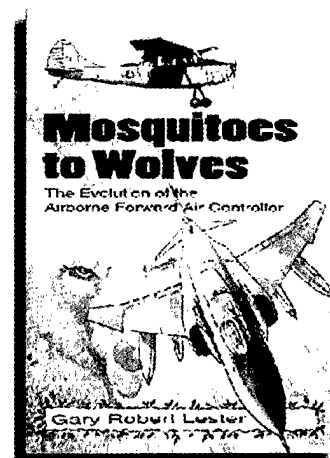
Dr. Lester traces the evolution of US close air support, with special emphasis on Korea and Vietnam. He discusses the differing views of the Army, Navy, Marine Corps, and Air Force at some length and compares close air support in these two conflicts. The author notes the need for close air support in the Gulf War and explores the future of close air support. He punctuates this history and analysis with dramatic experiences of those who made it happen.

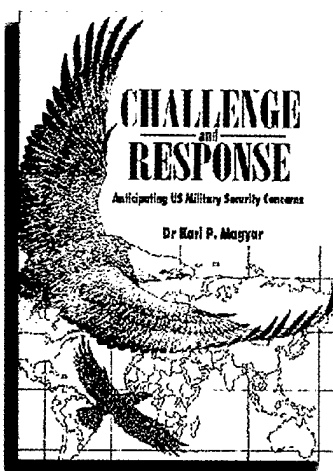
1997. 294 pages. Public release.

B-35

ISBN 1-58566-033-7

\$18.00





Challenge and Response: Anticipating US Military Security Concerns

Karl P. Magyar, editor. Maris McCrabb; Albert Mitchum; and Lewis B. Ware, associate editors

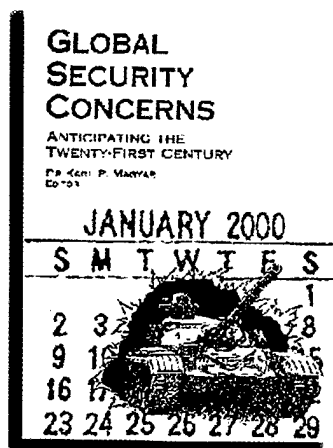
In this collection of essays, the contributors examine the implications of the formal dissolution of the Soviet Union and the Warsaw Pact on planning for future military threats. They attempt to identify the nature and source of the most likely future threats to global security. Part I contains a broad review of the major determinants of international change. Part II analyzes specific situations, the changing nature of warfare, and potential responses to emerging challenges.

1994. 444 pages. Public release.

B-56

ISBN 1-58566-053-1

\$27.00



Global Security Concerns: Anticipating the Twenty-First Century

Karl P. Magyar

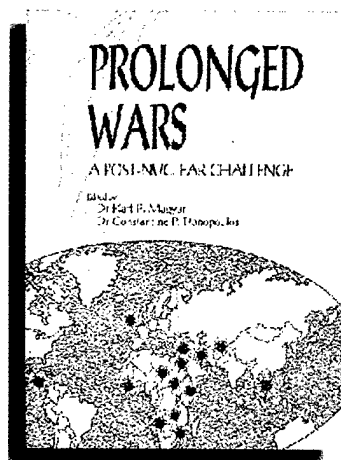
Dr. Magyar has assembled a group of experts on military issues to ponder global security concerns for the twenty-first century. The writers of this study use the lessons of the past to identify what issues will propel states to rely on violent means instead of peaceful procedures to achieve their objectives. This work also offers a background on each topic, identifies areas where conflicts likely will occur, and measures the possibility of peaceful resolution of issues.

1996. 336 pages. Public release.

B-7

ISBN 1-58566-006-X

\$20.00



Prolonged Wars: A Post-Nuclear Challenge

Karl P. Magyar et al.

The authors examine the underlying impact of the cold war on protracted conflict in Africa and Asia. These area specialists examine the factors that produced prolonged conflict and what each side in them considered the cause(s) of these struggles. They analyze the reasons for "success" and "failure" in each of these regional conflicts.

1994. 475 pages. Public release.

B-59

ISBN 1-58566-056-6

\$27.00

The Development of the B-52 and Jet Propulsion: A Case Study in Organizational Innovation

Mark D. Mandeles

National security decision makers face an uncertain world where the accelerated growth of knowledge has changed the character of technological advance and destabilized long-standing relations within and among the military services. This book separates the principles that guide decision making from the proverbs through a case study of decision making in the early post-World War II period. This study examines the impact of organization on the invention and development of jet propulsion—in the form of the B-52—and illustrates both the organizational conditions conducive to developing new operational concepts and the organizational innovations necessary to implement new technology. This study also examines how the Air Force organized to learn and acquire new technology, how the Air Force conceived or identified problems, and how it organized to ensure management would respond to program failure or errors.

1998. 208 pages. Public release.

B-38

ISBN 1-58566-036-1

\$13.00

Thunder and Lightning: Desert Storm and the Airpower Debates

Edward C. Mann III

Colonel Mann undertakes a critical analysis of air and space warfare as planned and waged in Operation Desert Storm. He explores debates about airpower and its uses as they played themselves out before, during, and after the successes of the Gulf War. He compares the debates of the 1970s–1990s with those of the 1920s–1940s. Colonel Mann explores the underpinnings of successful warfare and observes that the warriors of the future must have a strong knowledge of principles and concepts of war to apply information, training, and technological resources with acumen needed to win future victories. *Thunder and Lightning* is a companion volume to Reynolds's *Heart of the Storm*.

1995. 240 pages. Public release.

B-2

ISBN 1-58566-001-9

\$14.00

Joint Training for Night Air Warfare

Brian W. McLean

This book examines the history of joint air operations and night air operations from World War II through Operation Desert Storm. Colonel McLean focuses on the need for increased training for joint operations at night. He describes a hypothetical contingency in Korea to illustrate some of the challenges of conducting joint night operations. He offers recommendations for a building-block approach to improve training in joint night air warfare capability.

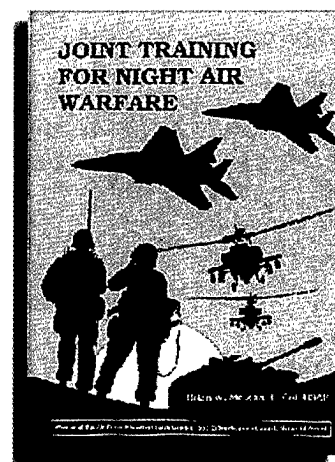
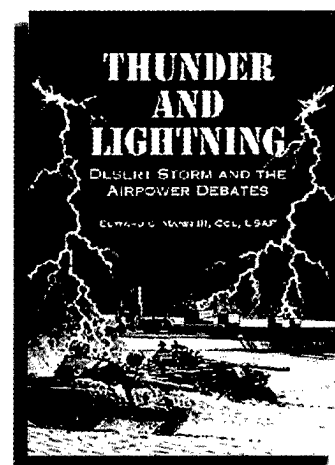
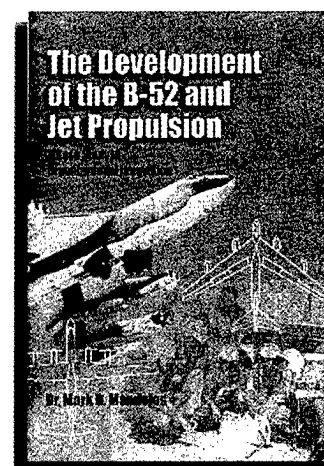
1991 Cannell winner.

1992. 122 pages. Public release.

B-46

ISBN 1-58566-044-2

\$7.50





Airpower's Gordian Knot: Centralized versus Organic Control

Stephen J. McNamara

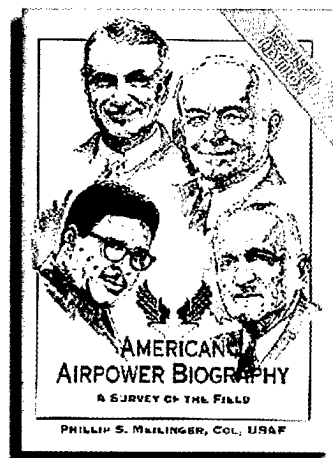
Colonel McNamara explores whether airpower should be controlled by a joint force air component commander (JFACC) or whether that control should be split among the various military services. He traces the evolution of indivisible airpower in World War II, creation of the first JFACC during the Korean War, the breakdown of centralized control in Vietnam, and the resurgence of JFACC during the Gulf War. Colonel McNamara provides insights into a problem that has no simple solution.

1994. 205 pages. Public release.

B-57

ISBN 1-58566-054-X

\$13.00



American Airpower Biography: A Survey of the Field

Phillip S. Meilinger

Colonel Meilinger reviews the literature on contributors to American airpower and asserts a scarcity of biographies and autobiographies. He provides the names of candidates for further research and encourages senior air leaders to pen their memoirs.

1995. 65 pages. Public release.

B-13

ISBN 1-58566-011-6

\$5.00



The Paths of Heaven: The Evolution of Airpower Theory

Edited by Phillip S. Meilinger

By giving airpower thinkers their due, *The Paths of Heaven* counterbalances the Air Force's tendency to emphasize operational concerns at the expense of theory. Most of the fifteen essays are contributed by current or former faculty of the School of Advanced Airpower Studies at Maxwell Air Force Base, Alabama. Collectively, the authors trace the development of airpower theory from its origins with Giulio Douhet, through the formulation of airpower doctrine during the interwar years at the Air Corps Tactical School, to current efforts to codify a cogent theory of space power. In the words of retired chief of staff Gen Ronald R. Fogleman, "*The Paths of Heaven* is a valuable means of increasing our expertise in the employment of airpower."

1997. 680 pages. Public release.

B-29

ISBN 1-58566-027-2

\$39.00

The Air Campaign: John Warden and the Classical Airpower Theorists

David R. Mets

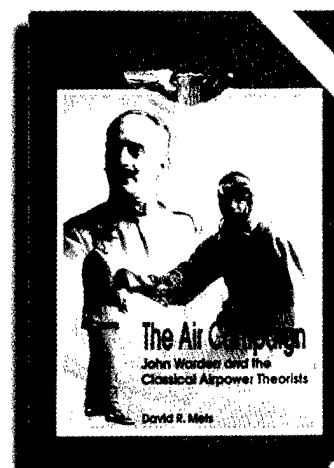
In light of the age-old belief of Confucius that no idea is new, Mets examines the role of Col John Warden in the Gulf War to determine if a revolution in military affairs had occurred. He relies on several twentieth-century antecedents to Warden, including Giulio Douhet, Hugh Trenchard, and Billy Mitchell to distill a pattern. Mets also addresses whether "the argument that antedated the Gulf War to the effect that such conflicts between states using conventional weapons and methods are a passing phenomenon." Chapter 6, the concluding chapter, provides an overview of Mets's discussion.

1999. Revised edition. 98 pages. Public release.

B-65

ISBN 1-58566-063-9

\$10.00



Land-Based Airpower in Third World Crises

David R. Mets

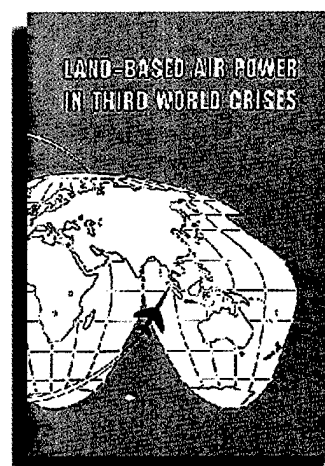
Dr. Mets examines the utility and limitations of land-based aircraft in third world crises over the past three decades. He offers several conclusions regarding the most effective use of airpower in crisis situations.

1986. 171 pages. Public release.

B-1

ISBN 1-58566-000-0

\$5.00



Airlift Doctrine

Charles E. Miller

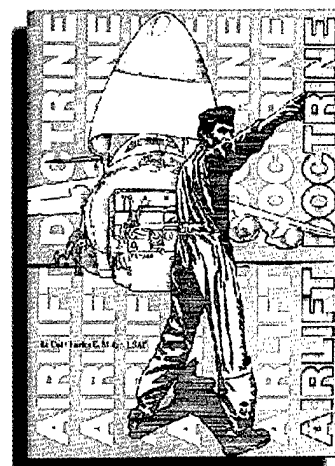
Colonel Miller shows how the worldwide orientation of American foreign policy, the numerous threats to free-world interests, and the speed and complexity of modern warfare have combined with political and resource constraints to produce today's airlift doctrine and force structure.

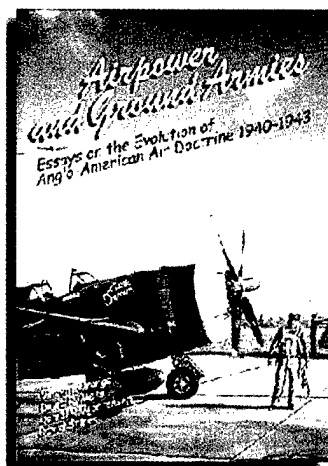
1988. 447 pages. Public release.

B-21

ISBN 1-58566-019-1

\$17.00





Airpower and Ground Armies: Essays on the Evolution of Anglo-American Air Doctrine, 1940-1943

Daniel R. Mortensen, editor

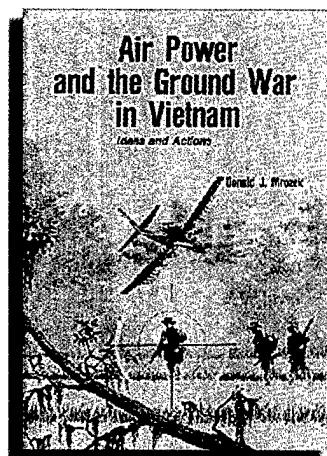
These four independent essays provide a perspective on airpower doctrine development that varies somewhat from the usual view. Essay 1 describes the organization, doctrine, operational practices, and personality of the air forces in the western desert from 1940 to 1943. Essay 2 describes and analyzes the events in northwest Africa during Operation Torch while the third analyzes the machinations in policy development in Washington. Essay 4 analyzes the great tactical aviation exercise in northwest Europe, emphasizing the famous cooperation between George S. Patton and Otto P. Weyland.

1998. 224 pages. Public release.

B-50

ISBN 1-58566-047-7

\$13.00



Airpower and the Ground War in Vietnam: Ideas and Actions

Donald J. Mrozek

Dr. Mrozek focuses on expectations concerning the impact of airpower on the ground war. He describes some of the actual effects but avoids treatment of some of the most dramatic air actions of the war, such as the bombing of Hanoi. He observes that the application of airpower is influenced by factors far beyond the battlefield.

1987. 204 pages. Public release.

B-17

ISBN 1-58566-015-9

\$9.00



The US Air Force After Vietnam: Postwar Challenges and Potential for Responses

Donald J. Mrozek

This book probes various groups of Americans as they come to grips with the consequences of the Vietnam War. Dr. Mrozek examines several areas of concern facing the United States Air Force, and the other services in varying degrees, in the years after Vietnam.

1988. 133 pages. Public release.

B-26

ISBN 1-58566-024-8

\$6.50

Strategy for Defeat: The Luftwaffe, 1933-1945

Williamson Murray

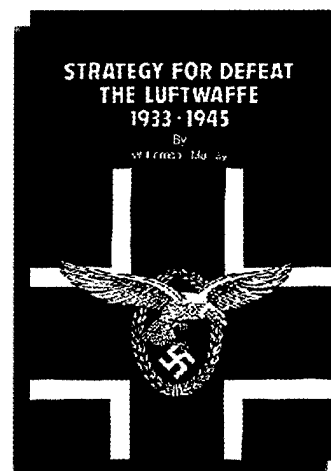
Dr. Murray's book provides a detailed analytical study of the development of the Luftwaffe. The author takes an in-depth look at the "easy war" (1939-40) and the turn toward Russia in Operation Barbarossa. Dr. Murray investigates the war of attrition from 1942 through early 1944 and the reasons for the final demise of the Luftwaffe from April through September 1944.

1983. 391 pages. Public release.

B-12

ISBN 1-58566-010-8

\$12.00



Aerospace Power: The Case for Indivisible Application

Grover E. Myers

Major Myers offers a serious alternative to "aerospace folklore." He proposes an indivisible airpower concept and argues that it would result in a far more flexible aerospace force structure—one that gets the most from our increasingly expensive and limited assets and applies the right force at the right place at the right time.

1986. 96 pages. Public release.

B-15

ISBN 1-58566-013-2

\$4.75



Deliberate Force: A Case Study in Effective Air Campaigning

Robert C. Owen, editor

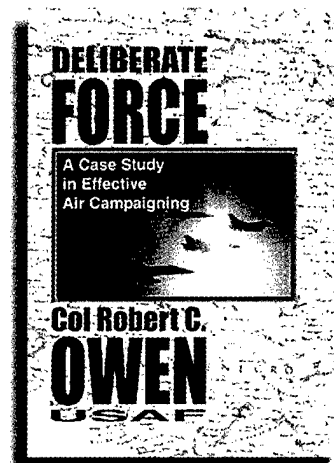
Operation Deliberate Force, conducted between 30 August and 20 September 1995, was the North Atlantic Treaty Organization's air campaign to advance the cause of peace in the Balkans region. This study of that campaign examines how and with what considerations the planners and executors of Deliberate Force linked military operations with the goals they were charged to attain. In 16 essays, 11 contributors discuss the geopolitical, sociological, diplomatic, technological, and operational factors that shaped the characteristics and outcome of Deliberate Force and, in so doing, identify the implications of this air campaign for future conflicts.

1999. 560 pages. Public release.

B-74

ISBN 1-58566-076-0

\$37.00





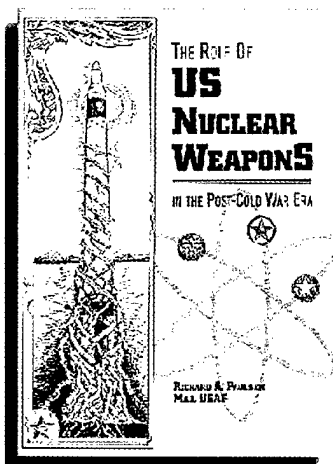
"Air Force Spoken Here": General Ira Eaker and the Command of the Air

James Parton

This is a reprint of James Parton's anecdotal biography of General Eaker that takes us from his start as a poor boy in Texas through his wartime service and his rise to four-star general to his post-war career as a latter-day Paul Revere.

2000. 570 pages. Public release.

B-11 ISBN 1-58566-080-9, reprint edition \$38.00



The Role of US Nuclear Weapons in the Post-Cold War Era

Richard A. Paulsen

Major Paulsen examines the role of nuclear weapons in the defense posture of the US between the end of World War II and the breakup of the USSR 50 years later. He gauges public opinion, reviews congressional testimony to determine the thinking of military leaders, and relies on his own military experience to assess new directions for deterrence in the post-cold war period. Major Paulsen surveys the continuing threat posed by nuclear weapons and recommends changes in US strategy for the post-cold war era.

1993 Cannell winner.

1994. 208 pages. Public release.

B-58 ISBN 1-58566-055-8 \$23.00



The World Wide Military Command and Control System: Evolution and Effectiveness

David E. Pearson

In this comprehensive analysis of the World Wide Military Command and Control System (WWMCCS), the author takes three distinct themes—organization, technology, and ideology—and examines how each contributed to the development of WWMCCS. He explains how and why it developed the way it did, focusing on the system's computers and communications networks and using a number of illustrations. An interview with the chief technical officer of the system that replaced WWMCCS brings a contemporary flavor to the study.

2000. 414 pages. Public release.

B-76 ISBN 1-58566-078-7 \$37.00

Airpower Journal Index, 1987-1996

Michael J. Petersen and Ms. Pamela Lang, editors

This reference book lists all articles and book reviews appearing in the *Airpower Journal* from 1987 to 1996 in author, title, and subject indexes.

1998. 208 pages. Public release.

B-49

Heart of the Storm: The Genesis of the Air Campaign against Iraq

Richard T. Reynolds

Colonel Reynolds presents a firsthand account of the struggle to design and implement the air campaign that proved instrumental in defeating Iraq in the Gulf War. Through documentary research and dialogue derived from interviews with key players such as Generals Dugan, Russ, Loh, and Horner, he traces the evolution of the air campaign plan known as Instant Thunder from its origins in the mind of Col John A. Warden III to the decision by General Schwarzkopf to employ airpower as his weapon of choice against Saddam Hussein. *Heart of the Storm* provides behind-the-scenes insights into how future decisions to use airpower will likely be made. It is a companion volume to Mann's *Thunder and Lightning*.

1995. 169 pages. Public release.

B-55

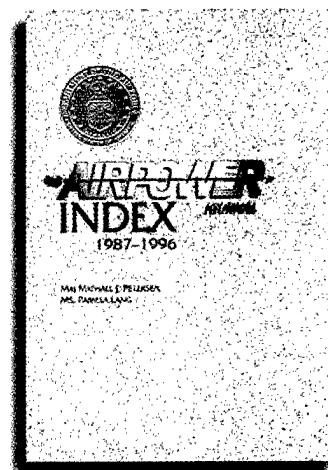
ISBN 1-58566-052-3

\$11.00

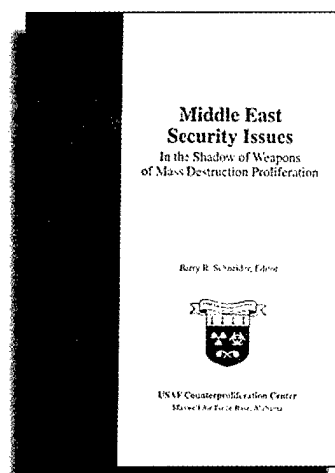
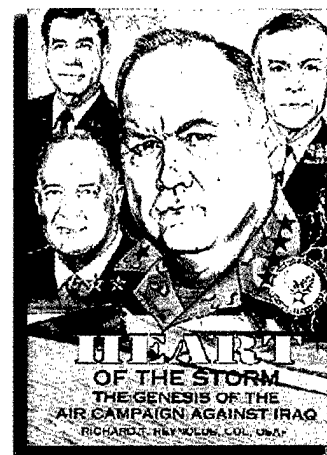
Middle East Security Issues: In the Shadow of Weapons

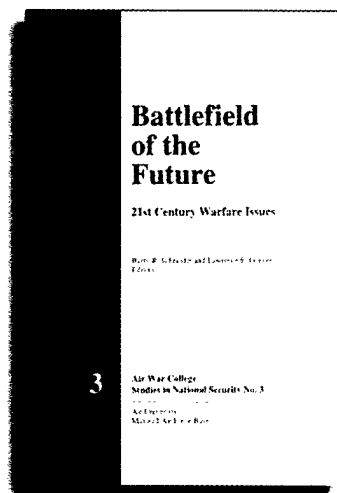
Barry R. Schneider, editor

This study addresses questions that demand an answer if US national security policy is to be well informed. In "NBC and Missile Proliferation in the Middle East," Lawrence Scheinman summarizes the nuclear, biological, and chemical weapons capabilities and missile systems of Egypt, Iran, Iraq, Israel, Libya, and Syria. "Recent Developments in the Persian Gulf," by Anthony H. Cordesman, looks at both the conventional and weapons of mass destruction military balance between the states in the region. "Arab Perspectives on Middle Eastern Security," by Ibrahim A. Karawan, concludes that "the fact that the Middle East has not been among the success stories in curbing the spread of nuclear weapons is not surprising." Karawan believes that policy makers in the surrounding Arab and Muslim states cannot ignore the fact of Israeli nuclear weapons and explains the proliferation of chemical and biological weapons in such states as a natural deterrence response. "Regional Security and Arms Control in the Middle East: The Nuclear Dimension," by Avner Cohen, explains the diametrically opposite approaches taken by the two sides in the Arms Control and Regional Security negotiations. "The Egyptian-Israeli Confrontation over the Nuclear Nonpro-



CSAF Reading List





liferation Treaty," by W. Andrew Terrill, contrasts Egypt's changing approach to the Israeli nuclear weapons possession.

1999. 146 pages. Public release.

B-75

ISBN 1-58566-077-0

\$12.00

Battlefield of the Future: Twenty-first Century Warfare Issues

Barry R. Schneider and Lawrence E. Grinter, editors

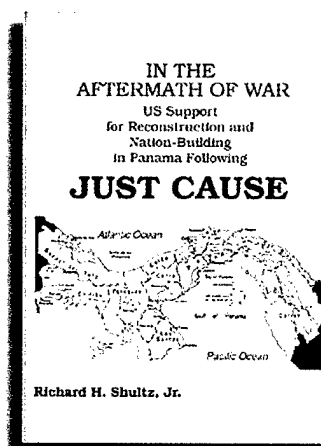
This is a book about strategy and war fighting in the midst of a revolution in military affairs as the world moves into the twenty-first century. Composed of 10 essays, the book looks at such subjects as debate over the future of airpower, the unique threat of biological warfare, the impact of the information revolution on warfare, and how the changes in military technology might require a rethinking of principles of warfare. The book also examines whether we are going through, at the turn of the century, a new revolution in military affairs caused by new military technologies, new organization for warfare, and new strategies for employing forces on future battlefields.

1998. 286 pages. Public release.

B-64

ISBN 1-58566-061-2

\$19.00



In the Aftermath of War: US Support for Reconstruction and Nation-Building in Panama Following Just Cause

Richard H. Shultz Jr.

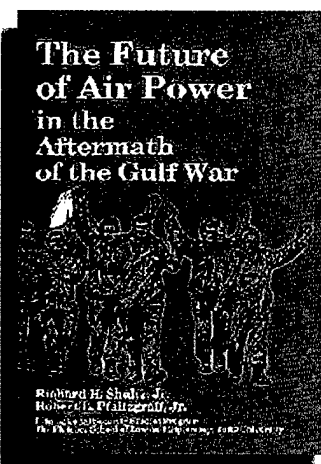
Dr. Shultz discuss the December 1989 invasion of Panama and assesses the effectiveness of American foreign policy implemented afterward. He focuses on reconstruction, nation-building, and democratization following Operation Just Cause. He reviews contemporary Panamanian politics and comments on what went wrong with our contingency planning. Dr Shultz examines the origins and future applications of the Military Support Group and concludes that future postconflict situations will require DOD to create an interagency mechanism that can respond in an effective way to both civilian and military concerns.

1993. 88 pages. Public release.

B-61

ISBN 1-58566-058-2

\$10.00



The Future of Airpower in the Aftermath of the Gulf War

Richard H. Shultz Jr. and Robert L. Pfaltzgraff Jr.

This collection of essays reflects the proceedings of a 1991 conference on "The United States Air Force: Aerospace Challenges and Missions in the 1990s," sponsored by the USAF and Tufts

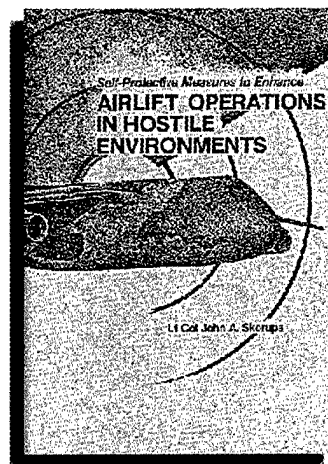
University. The 20 contributors comment on the pivotal role of airpower in the war with Iraq and address issues and choices facing the USAF, such as the factors that are reshaping strategies and missions, the future role and structure of airpower as an element of US power projection, and the aerospace industry's views on what the Air Force of the future will set as its acquisition priorities and strategies. The authors agree that aerospace forces will be an essential and formidable tool in US security policies into the next century. The contributors include academics, high-level military leaders, government officials, journalists, and top executives from aerospace and defense contractors.

1992. 386 pages. Public release.

B-48

ISBN 1-58566-046-9

\$23.00



Self-Protective Measures to Enhance Airlift Operations in Hostile Environments

John A. Skorupa

Colonel Skorupa examines strategy, doctrine, forces, threat, and technological issues relating to airlift operations. He blends military art with industrial science. Colonel Skorupa explains threats to airlift and how electronic warfare and other technological applications would counter such threats.

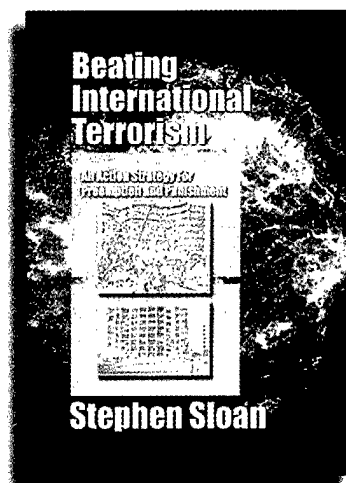
1988 Cannell winner.

1989. 201 pages. Public release.

B-30

ISBN 1-58566-028-0

\$8.50



Beating International Terrorism: An Action Strategy for Preemption and Punishment

Stephen Sloan

Dr. Sloan writes this book primarily for senior- and middle-level officials and officers who will be responsible for conducting war against terrorism. He examines several definitional problems, analyzes the factors involved in developing approaches to counter and preempt terrorism, and looks at the policy issues regarding the use of force.

2000. Revised edition. 110 pages. Public release.

B-3

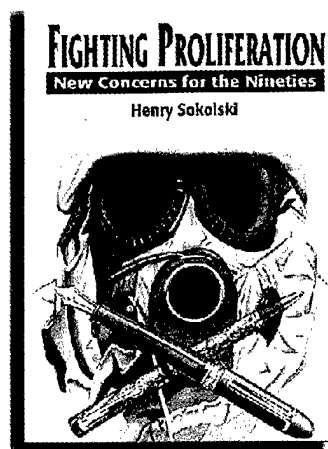
ISBN 1-58566-079-5

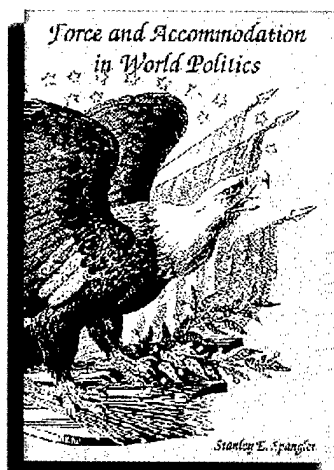
\$8.00

Fighting Proliferation: New Concerns for the Nineties

Henry Sokolski, editor

This publication examines such issues as devising effective strategy against the proliferation of nuclear weapons, coping with the spread of space technology, and curbing Iran's and North Korea's strategic programs. Seventeen contributors address these challenges and their implications for US policy in the book's five divi-





sions: part 1 explores how best to reform existing nonproliferation efforts; part 2 considers new high-leverage systems likely to threaten the US in the near future; parts 3 and 4 focus on two new truculent proliferators—North Korea and Iran; and part 5 discusses the need to develop a long-term diplomatic, political, economic, and military strategy against proliferation. *Fighting Proliferation* places itself in the mainstream of opposition to proliferation and the search for practical, policy-relevant approaches to dealing with it.

1996. 396 pages. Public release.

B-19

ISBN 1-58566-017-5

\$23.00

Force and Accommodation in World Politics

Stanley E. Spangler

Dr. Spangler shows that conciliatory approaches or accommodative measures have frequently been avoided by the United States in its foreign relations and, if used, have too often been undervalued in comparison to military force. He develops a model or conceptual approach to foreign policy that he calls "positive diplomacy," which is to him a preferable method of integrating force and diplomacy in this very complicated and increasingly dangerous world.

1991. 380 pages. Public release.

B-42

ISBN 1-58566-040-X

\$15.00

Beyond Horizons: A Half Century of Air Force Space Leadership

David N. Spires; George W. Bradley III, senior editor; Rick W. Sturdevant and Richard S. Eckert, associate editors

This book is a study of the Air Force's long involvement in initiating, developing, and applying the technology of space-based systems in support of the nation's security. It ranges from America's space and missile efforts prior to the launch of the Soviet sputniks in 1957, right up to the coming of age of military space employment in the Persian Gulf War of 1991. Finally, the study offers an assessment of the Air Force's leadership position in the ongoing debate over service roles and missions and its vision for the nation's space program entering the new century. This is a slightly revised edition of a book originally published by Air Force Space Command in 1997.

1998. 406 pages. Public release.

B-63

ISBN 1-58566-060-4

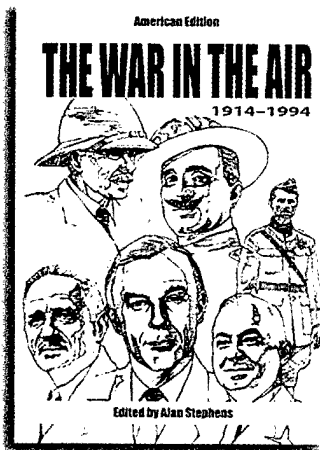
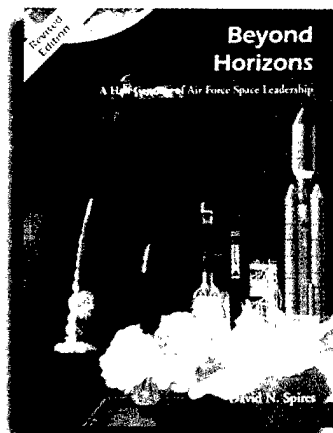
\$25.00

The War in the Air, 1914-1994

Alan Stephens, editor

This book contains the proceedings of a conference held by the Royal Australian Air Force (RAAF) in Canberra in 1994. Since its publication by the RAAF's Air Power Studies Centre in that year, the book has become a widely used reference at universities, mil-

CSAF Reading List



itary academies, and other educational institutions around the world. This American edition is a somewhat shortened version with minor editorial changes.

The contributors discuss the evolution of airpower from World War I to the near future. Essay subjects include World War I; doctrinal development in the interwar period; strategic bombing and support of surface forces in World War II; and airpower in the Korean War, Vietnam War, Arab-Israeli Wars, Falklands War, and Persian Gulf War; plus coverage of airpower in such peripheral conflicts as Operation El Dorado Canyon, the Malayan Emergency, and the Israeli raid on the Osirak nuclear reactor.

2000. 438 pages. Public release.

B-78

ISBN 1-58566-087-6

\$36.00

The Army and Its Air Corps: Army Policy toward Aviation, 1919-1941

James P. Tate

From the Armistice in 1918 to the late 1930s, there was continuous controversy over the place of aviation in the military establishment. This book details how airpower visionaries, with varying degrees of tact, often risked charges of insubordination in preaching the gospel of airpower. As aviation technology advanced and as Army leaders were "educated" in the capabilities of aircraft, they showed genuine interest in the potential of airpower. The author contends that their decisions often favored the Air Corps and that the air arm received a lion's share of the Army budget during a period of extreme austerity. Dr. Tate states that the Air Corps, far from being a stepchild, had become a princess by the late 1930s.

1998. 217 pages. Public release.

B-62

ISBN 1-58566-059-0

\$14.00

The Air Force Role in Developing International Outer Space Law

Delbert R. Terrill Jr.

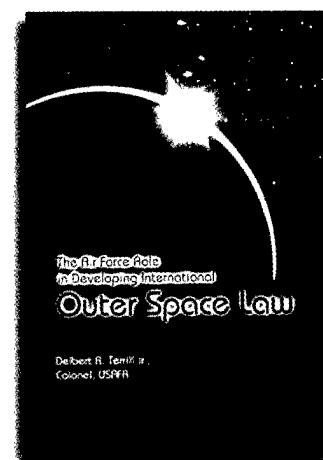
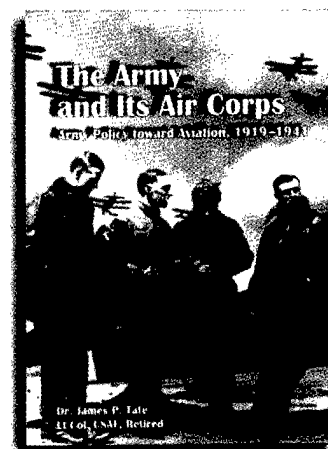
Colonel Terrill provides an in-depth examination of the historical evolution of Air Force thinking and action on the development of international law as it applies to outer space. He traces the Air Force's continual resistance to treaties and other conventions that would have defined the demarcation of the "boundary" between airspace and outer space. He shows that the Air Force position was grounded in the unwillingness to define outer space narrowly before the military had thoroughly researched and tested technological capabilities that could be employed in space. Terrill concludes by raising concerns about current issues that come into play on efforts to refine international law as it relates to outer space. These issues include technological advances and possible future international cooperation in space ventures.

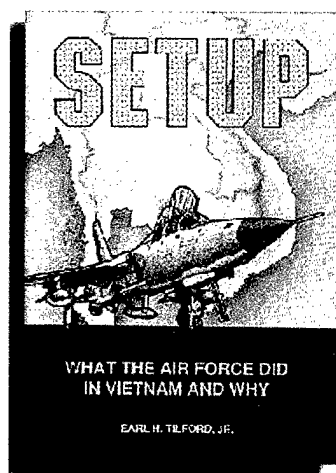
1999. 155 pages. Public release.

B-69

ISBN 1-58566-066-3

\$12.00





Setup: What the Air Force Did in Vietnam and Why

Earl H. Tilford Jr.

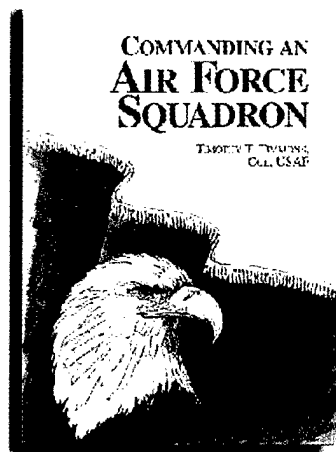
American military professionals, especially the US Air Force, have had a difficult time understanding their role in this nation's defeat in Vietnam. Dr. Tilford provides a critical self-analysis and questions the underlying assumptions of the Air Force's strategy in Southeast Asia. He argues that we must understand what went wrong in Vietnam and why and not manipulate the record and paint failure as victory. He explains what led to the "setup," which not only resulted in a failure for airpower but also contributed to the fall of South Vietnam, Laos, and Cambodia to Communist forces in 1975.

1991. 328 pages. Public release

B-40

ISBN 1-58566-038-8

\$12.00



Commanding an Air Force Squadron

Timothy T. Timmons

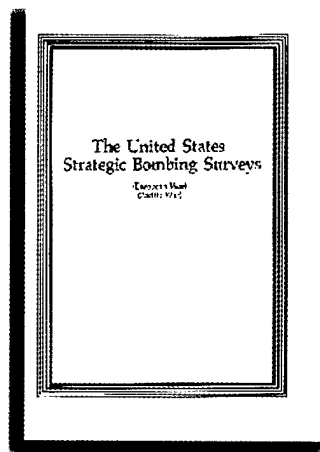
Colonel Timmons presents the views of many junior colonels and senior lieutenant colonels who have served as squadron commanders as he discusses the roles and responsibilities of this challenging assignment. Colonel Timmons's command and leadership principles, recommendations, and suggestions—though directed to the Air Force audience—apply to other US military services, officers of other nations, and civilian organizations and institutions.

1993. 148 pages. Public release.

B-9

ISBN 1-58566-008-6

\$10.00



The United States Strategic Bombing Surveys

This volume contains reprints of the Summary Reports—30 September 1945 (European War) and 1 July 1946 (Pacific War)—of the strategic bombing surveys conducted as World War II was coming to a close.

1987. 124 pages. Public release.

B-20

ISBN 1-58566-018-3

\$7.50

Airpower and Maneuver Warfare

Martin van Creveld, Kenneth S. Brower,
and Steven L. Canby

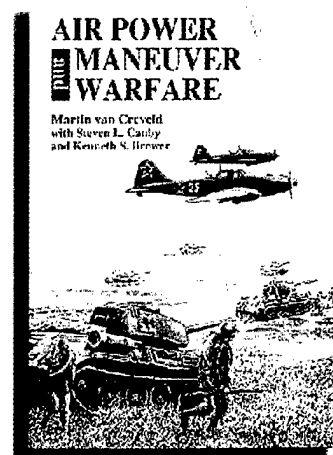
The authors identify and discuss the fundamental concepts and principles of maneuver warfare, compare and contrast it to attrition-style warfare, and traces its origins and history. They examine the role of airpower in enhancing maneuver during the early German campaigns of World War II, in Germany's 1941 Russian campaigns, and in the Soviet version of maneuver warfare in World War II. They analyze the importance of airpower in the maneuver warfare employed by Israel in the 1967 and 1973 wars and by the Coalition forces in the Gulf War. Dr. van Creveld forecasts what the role of airpower will be in warfare during the coming years. The book includes a response to the authors by air doctrine analysts at Air University.

1994. 284 pages. Public release.

B-53

ISBN 1-58566-050-7

\$17.00



Organizational Structure for Air National Guard Tactical Aircraft Maintenance

Rudolph Ventresca

Colonel Ventresca analyzes and assesses the changes in the organizational structure of the active Air Force and the Air National Guard (ANG) fighter maintenance units from the time the ANG became a separate reserve component in 1946 to the present-day organization, which parallels the active Air Force. He provides insight into the ANG tactical air forces maintenance organization by chronicling the past, viewing the present, and projecting the reader into the future, taking into account those things that will likely affect the way ANG tactical aircraft maintenance is organized and will operate in the future.

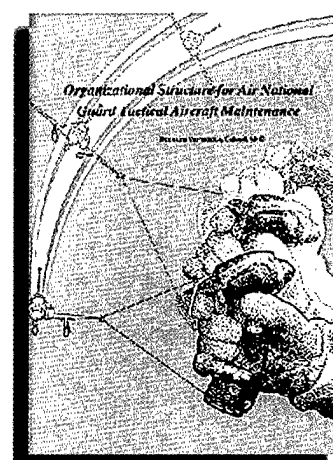
1990 Cannell winner.

1991. 116 pages. Public release.

B-43

ISBN 1-58566-041-8

\$7.00



From the Line in the Sand: Accounts of USAF Company Grade Officers in Support of Desert Shield/Desert Storm

Michael P. Vriesenga

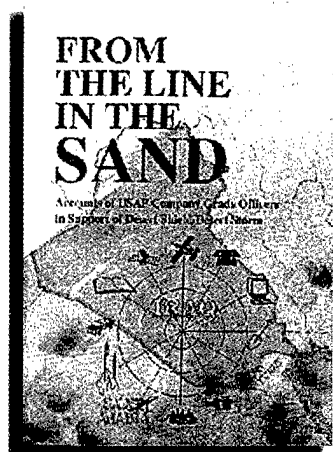
Captain Vriesenga presents a compilation of essays by 34 participants below the rank of major who contributed to the Gulf War. Their stories focus on such topics as deployment, organizational patterns of units, delegation of authority and responsibility, emotions and psychology of combat, the impact of combat losses, airfield construction, medical care, and aircraft preparations.

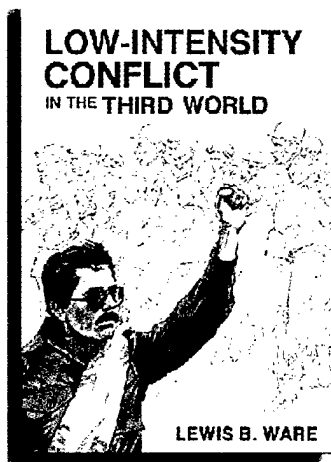
1994. 289 pages. Public release.

B-14

ISBN 1-58566-012-4

\$20.00





Low-Intensity Conflict in the Third World

Lewis B. Ware et al.

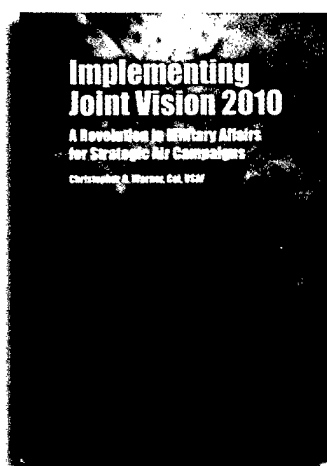
A common thread ties together the five case studies of this book: the persistence with which the bilateral relationship between the United States and the Soviet Union continues to dominate American foreign and regional policies. These essays analyze the LIC environment in Central Asia, the Middle East, Southeast Asia, Latin America, and sub-Saharan Africa.

1988. 189 pages. Public release.

B-24

ISBN 1-58566-022-1

\$7.50



Implementing Joint Vision 2010: A Revolution in Military Affairs for Strategic Air Campaigns

Christopher G. Warner

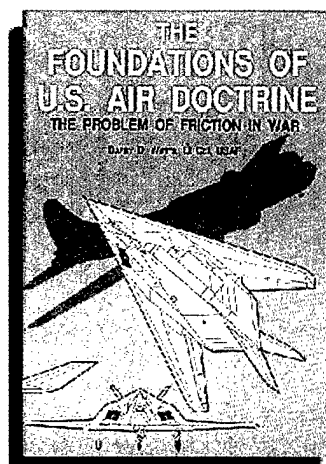
Implication of the CJCS's *Joint Vision 2010* and the United States Air Force's *Global Engagement* will lead to a strategic air campaign revolution in military affairs. A strategic air campaign can perform worldwide mobility to deter aggression or win battles and wars with application of combat power. These future air campaigns should achieve strategic objectives that prevent crisis escalation, enhance deterrence, or support other nonmilitary national objectives with timely delivery of logistical resources and people worldwide. The synthesis of today's airpower doctrine; tomorrow's dominant battle-space knowledge, *JV2010* operational-concepts development; rapid and effective command, control, communications, computers, and intelligence; high-penetration, low-observable aircraft employing precision weapons rapidly, disproportionately and against parallel target sets; and strategic airlift providing critical resources and supporting worldwide mobility will give the joint force commander and the US military significant long-range strategic airpower capabilities to achieve national security objectives. As we complete this synthesis, the United States will experience a strategic air campaign revolution in military affairs.

1999. 98 pages. Public release.

B-67

ISBN 1-58566-065-5

\$7.00



The Foundations of US Air Doctrine: The Problem of Friction in War

Barry D. Watts

This study analyzes airpower doctrine from the viewpoint of Clausewitzian friction. The result of the analysis is the conclusion that American airpower doctrine has changed very little since the 1930s and that it is fundamentally flawed.

1984. 159 pages. Public release.

B-8

ISBN 1-58566-007-8

\$4.00

Archie, Flak, AAA, and SAM: A Short Operational History of Ground-Based Air Defense

Kenneth P. Werrell

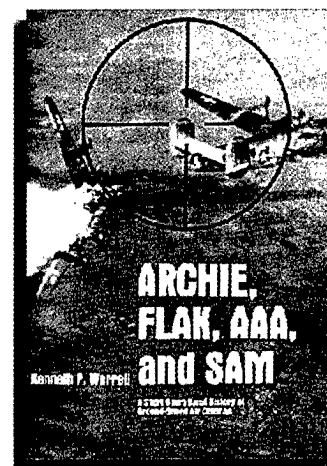
The title refers to the name that airmen use and have used to describe ground fire against aircraft: Archie in World War I (from the British), flak in World War II and Korea (from the Germans), AAA throughout but especially in Vietnam (from the American abbreviation for antiaircraft artillery), and most recently SAM (from the US abbreviation for surface-to-air missiles). This study concentrates on how these weapons developed and how they impacted both US and non-US air operations.

1988. 224 pages. Public release.

B-28

ISBN 1-58566-026-4

\$8.50



The Evolution of the Cruise Missile

Kenneth P. Werrell

Although among the newest of US weapons, the cruise missile possesses a rich conceptual and technological heritage. The author addresses this heritage and the importance of understanding it when we consider deployment and employment options. Without the perspective provided by this history, our perception of the cruise missile's purpose and use lacks depth and understanding.

1985. 303 pages. Public release.

B-6

ISBN 1-58566-005-1

\$7.00



Military Airpower: The CADRE Digest of Airpower Opinions and Thoughts

Charles M. Westenhoff

Colonel Westenhoff provides a collection of quotations about the utility and potential of airpower. The book is divided into the following sections: Airpower, War Technology, the Principles of War, and Command. This digest is organized to be a handy reference.

1990. 224 pages. Public release.

B-36

ISBN 1-58566-034-5

\$8.50





On Celestial Wings

Edgar D. Whitcomb

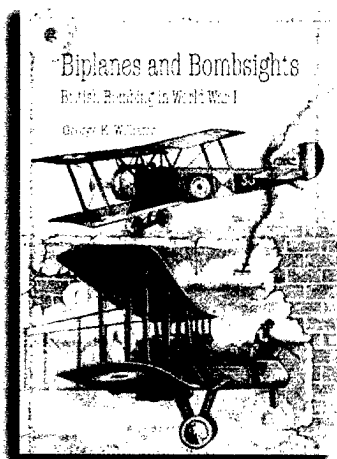
The first Army Air Corps navigational class at Miami University graduated in November 1940. In this book, Colonel Whitcomb follows these first celestial navigators through their World War II trials. Twenty-five personal stories and a series of photographs paint the stories of these men as they fought—combining the ancient art of navigating by the stars with the equipment on their B-17s, became prisoners of war, lived through the Bataan Death March, escaped from Japanese captors, survived primitive conditions in the Philippines, died for their country, or later served the US as navigators on the aircraft of presidents and dignitaries.

1996. 227 pages. Public release.

B-4

ISBN 1-58566-003-5

\$14.00



Biplanes and Bombsights: British Bombers in World War I

George K. Williams

Colonel Williams, USAF, Retired, presents a comprehensive study of British bombing efforts in the Great War. He contends that the official version of costs and results underplays the costs while overplaying the results. Supported by postwar findings of both US and British evaluation teams, he argues that British bombing efforts were significantly less effective than heretofore believed. Colonel Williams also presents a strong argument that German air defenses caused considerably less damage to British forces than pilot error, malfunctioning aircraft, and bad weather. That we believed otherwise supports the notion that British bombing raids had forced Germany to transfer significant air assets to defend against them. Williams, however, found no evidence that any such transfer occurred. Actual results, Colonel Williams argues, stand in strong contrast to claimed results.

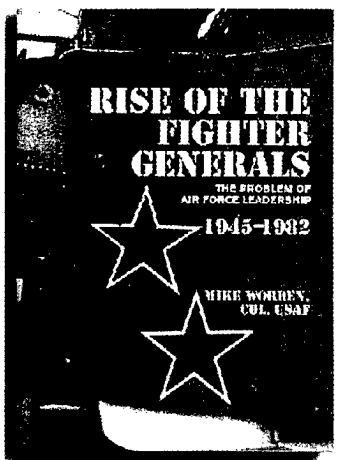
1999. 330 pages. Public release.

B-68

ISBN 1-58566-073-6

\$25.00

CSAF Reading List



Rise of the Fighter Generals: The Problem of Air Force Leadership (1945-1982)

Michael Worden

Colonel Worden relies on oral histories, personal interviews, military and social histories, quantitative data, and sociological research to show how fighter generals rose to domination in the Air Force. From its inception through the 1960s, the Air Force was dominated by bomber pilots. Embracing an absolutist perspective, bomber pilots struggled to maintain their dominance. In the 1960s, however, they saw their positions of leadership slowly yielding to the experience, broader education, and pragmatism of fighter pilots. This study terminates in 1982 when the leadership changes with the selection of a string of generals with fighter backgrounds as Air Force chiefs of staff.

1998. 291 pages. Public release.

B-51

ISBN 1-58566-048-5

\$18.00

CADRE PAPERS

Occasional monographs that seek to promote understanding of the theory and application of aerospace power. These studies are sponsored by the Airpower Research Institute of Air University's College of Aerospace Doctrine, Research and Education (CADRE). Some of these papers are available on the Internet at the following address:

http://www.cadre.maxwell.af.mil/CADRE_Papers/cadre_papers.htm



Paradigm Lost: Rethinking Theater Airlift to Support the Army After Next

David W. Allvin

Colonel Allvin analyzes the theater airlift implications for the United States Army's vision, Army After Next (AAN)—now called the Army Vision: The Transformation of the Army, which is a continuum of the AAN—for land warfare in the twenty-first century. He identifies theater airlift capabilities critical to the AAN concept and examines emerging systems that seem likely to furnish those capabilities. He argues that improvements in cargo-handling, situational awareness, and defensive systems—as well as the ability to operate in austere conditions—constitute the most crucial future requirements for theater airlift. Colonel Allvin concludes that the most promising emerging systems for achieving required theater airlift capabilities include the tilt-wing concept, autonomous cargo-handling systems, and a standoff capability for examining the suitability of opportune landing sites.

2000. 110 pages. Public release.

P-14 ISBN 1-58566-084-1 \$8.50

Airpower against an Army: Challenge and Response in CENTAF's Duel with the Republican Guard

William F. Andrews

Colonel Andrews concentrates on tactical innovation during war. He examines the extent to which USAF doctrine prepared the US Central Command Air Forces (CENTAF) for its mission against the Republican Guard Forces Command (RGFC). He describes how CENTAF adjusted air operations against Iraq's RGFC in the 1990-91 invasion of Kuwait. CENTAF instituted six significant tactical innovations in one week that required its aviators to create new tactics in the midst of combat operations. Colonel Andrews evaluates those innovations because they enabled CENTAF to satisfy theater objectives. He recommends that the Air Force identify means to measure air opera-

tions against land forces during peacetime because the press of war does not provide time for reflection and analysis. (This book is on the Chief of Staff Reading List.)

1998. 144 pages. Public release.

P-2

\$9.00



Once in a Blue Moon: Airmen in Theater Command—Lauris Norstad, Albrecht Kesselring, and Their Relevance to the Twenty-First Century Air Force

Howard D. Belote

Colonel Belote concentrates on the question: What are the qualities necessary for airmen to perform effectively as war-fighting commanders in chief (CINC)? He identifies those necessary qualities of knowledge, insight, and skill through three methods. He reviews theoretical and historical literature on command. He uses the careers of two early theater CINCs—Generals Dwight D. Eisenhower and Jacob L. Devers—to establish a baseline for analysis. Colonel Belote offers two detailed biographical case studies on Gen Lauris Norstad and Field Marshal Albrecht Kesselring. He complements his historical inquiry with findings based on interviews with senior Department of Defense officials coupled to an analysis of the recent literature on joint command. Colonel Belote proposes a creation of a new and intentionally broad-gauged "joint warfighter" career track.

2000. 117 pages. Public release.

P-12 ISBN 1-58566-082-5 \$8.50

Airpower and the Cult of the Offensive

John R. Carter

Major Carter explores three case studies that have important similarities: the doctrine of Great Britain's Royal Air Force from 1918 to 1938, the Israeli Air Force's strategy from 1967 to 1973, and the United States Air

Force's strategy from 1953 to 1965. He begins by establishing the theoretical background necessary for case study analysis. He dissects the relationship between offense and defense to discover that airpower defense enjoys neither an advantage of position nor of time. He examines the nature of offense and defense as they apply to airpower and offers reasons military organizations may prefer offensive doctrines. Major Carter identifies the elements and implications of the cult of the offensive.

1998. 125 pages. Public release.

P-3

\$9.00

**Shooting Down a "Star":
Program 437, the US
Nuclear ASAT System and
Present-Day Copycat Killers**

Clayton K. S. Chun

Colonel Chun undertakes a case study of an experimental US antisatellite defense fielded by the Air Force in the 1960s as a departure for assessing the need for an ASAT system today. The author argues that the US Air Force was able to develop a relatively effective system based on rudimentary technology. Using aging booster rockets (the Thor ICBM) and existing tracking and targeting radar systems, the Air Force was able to intercept satellites. Colonel Chun argues that extrapolating from this historical example several states, particularly North Korea, Iran, India, and the Peoples Republic of China, could use widely available improved missiles and radar systems to develop ASAT weapons that would make critical US and allied space systems (military and commercial) vulnerable to attack, thus seriously undermining our offensive and defensive capabilities and perhaps wreak havoc on our economic system.

2000. 98 pages. Public release.

P-8

ISBN 1-58566-071-X

\$7.00

**Uninhabited Combat Aerial
Vehicles: Airpower by the
People, For the People,
But Not with the People**

Richard M. Clark

Lt Col Clark chronologically traces the evolution of uninhabited combat aerial vehicles (UCAV) beginning two centuries before the birth of Christ and ending with the USAF

abandonment of unmanned aerial vehicles (UAV) and UCAVs in the late 1970s. He provides some background information and examines the most current USAF involvement with UCAVs. Lt Col Clark discusses the obstacles that prevented unmanned aviation programs of the past from becoming operationally significant. He extracted evidence from current periodicals, from interviews with UAV and UCAV experts, and from other supporting documentation to determine what significant obstacles UCAVs may face in achieving operational significance in the Air Force. Lt Col Clark provides recommendations for overcoming the obstacles and managing the risks and uncertainties involved with UCAVs.

2000. 100 pages. Public release.

P-13

ISBN 1-58566-083-3

\$9.50

**Airpower in Small Wars: The
British Air Control Experience**

David J. Dean

A brief examination of the concept of air control as practiced by the Royal Air Force (RAF) in the Middle East between the two world wars.

1985. 21 pages. Public release.

P-5

\$2.25

**Military Art and the American
Tradition: The Vietnam Paradox
Revisited**

Dennis M. Drew

A brief assessment of the American strategy in Vietnam and traditional American military views about the art of warfare.

1985. 10 pages. Public release.

P-4

\$2.50

**Rolling Thunder 1965:
Anatomy of a Failure**

Dennis M. Drew

A study of the interplay of policy and doctrine during the conduct of a major military campaign.

1986. 66 pages. Public release.

P-1

\$7.50

Toward an Air and Space Force: Naval Aviation and the Implication for Space Power

Mark P. Jelonek

The Air Force and Air Force Space Command need an official implementation plan to integrate space into air operations or they might founder in this third attempt to transition to an air and space force. The historical precedent established during the integration of aviation into the US Navy from 1921 to 1941 suggests the policy areas essential to successful integration. The Air Force has initiated several excellent programs to increase the knowledge and understanding of space operations in the flying community by incorporating space capabilities and products into air operations, professional military community by incorporating space capabilities and products into air operations, professional military education, and field exercises. Including space power in war games is also promoting understanding and creating an environment for innovation. The Air Force is on the verge of a bitter dispute between combat aircraft; intelligence, surveillance, and reconnaissance aircraft; unmanned aerial vehicles; and space systems. From this debate, the Air Force must establish priorities. While space operations officers have earned the highest ranks in the Air Force, they are underrepresented in the command positions. Providing opportunities for space operators to experience air operations will cultivate aerospace officers to employ the aerospace force. The Air Force can benefit from this historical analogy by recognizing that integration is more than the acquisition of weapons and combat capabilities. Integration relies on a powerful human component that will ultimately determine the success or failure of the endeavor.

1999. 94 pages. Public release.

P-11 ISBN 1-58566-072-8 \$9.00

Synchronizing Airpower and Firepower in the Deep Battle

R. Kent Laughbaum

Major Laughbaum argues that current joint doctrine does not provide sufficient and acceptable guidance for synchronizing Air Force and Army deep operations. He analyzes service and joint doctrine produced since Operation Desert Storm and examines the evolution of the fire support coordination line

(FSCL). He traces the development of the Army's AirLand Battle doctrine and historical Air Force perspectives on the deep battle. His investigation of the deep battle during the Persian Gulf War emphasizes targeting and the application of the FSCL. Major Laughbaum provides five recommendations to change joint doctrine so that our services can work together effectively.

1999. 92 pages. Public release.

P-6

\$9.00



XIX Tactical Air Command and ULTRA: Patton's Force Enhancers in 1944

Campaign in France

Bradford J. "BJ" Shwedo

Major Shwedo examines the relationship among ULTRA, Gen George S. Patton Jr.'s ground scheme of maneuver, and the operations of XIX Tactical Air Command. He also examines ULTRA reports and compares them to the standard accounts of the various battles. Major Shwedo traces Patton's higher tactical and operational decisions from the hedgerows of Normandy in early August 1944 to the banks of the Moselle River, just 50 miles from the German border. He contends that both the Air Force and the Army should learn the proper lessons from this campaign concerning how best to integrate intelligence, ground maneuver, and airpower. Major Shwedo recommends that these same tools could be usefully combined in the technologically enhanced era of the twenty-first century.

2001. 158 pages. Public release.

P-17 ISBN 1-58566-089-2 \$13.00

Does the United States Need Space-Based Weapons?

William L. Spacy II

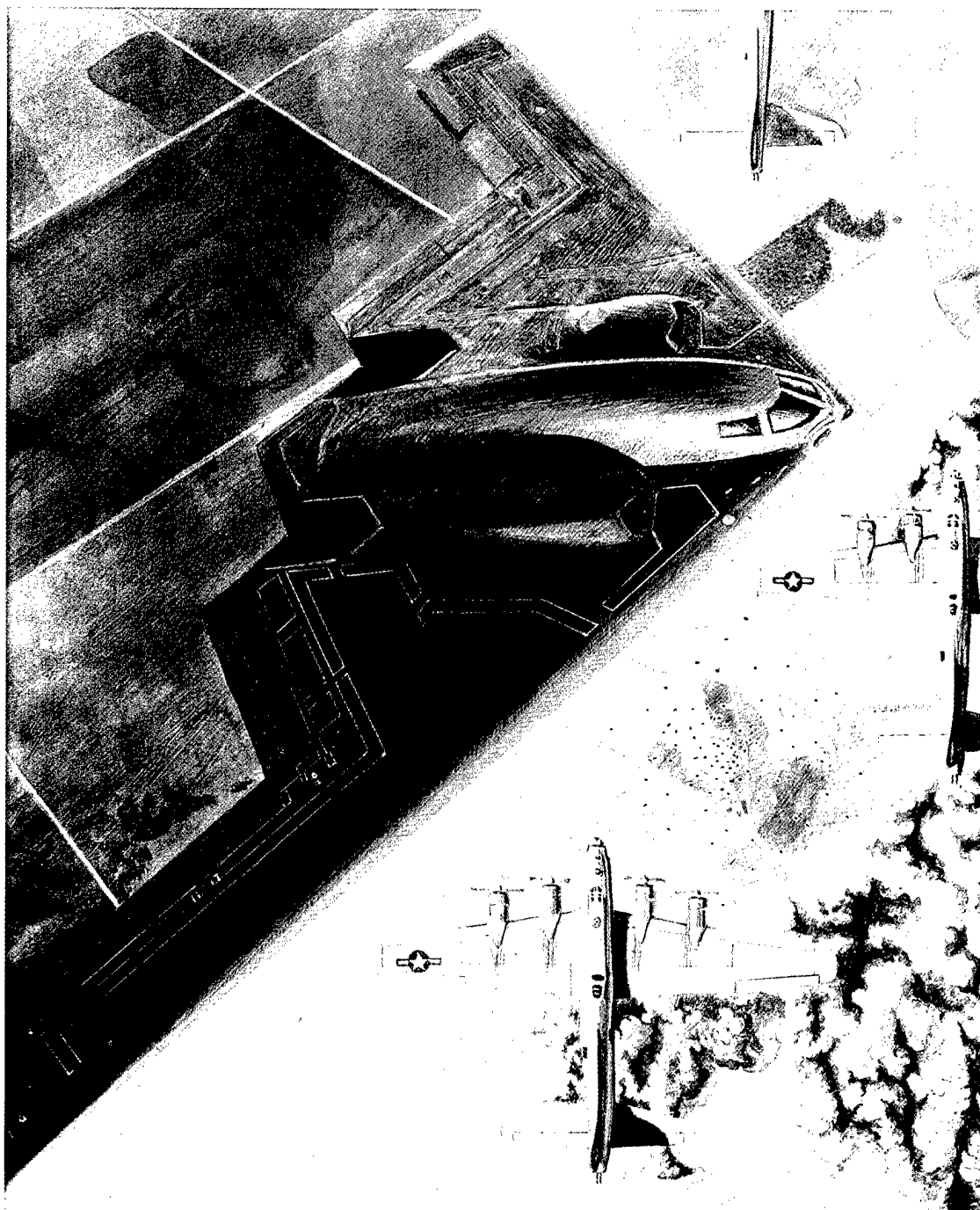
Major Spacy examines the kinds of weapons that have been proposed for use in space. He compares their capabilities with those of their surface-based counterparts. He addresses two questions: What do space-based weapons have to offer that other forms of military power lack? What are space-based weapons

likely to cost both in terms of dollars and in lost opportunities for pursuing other systems? Major Spacy evaluates the theoretical capabilities of orbital weapons and compares them to weapons already in existence and concepts proposed for development. His objective is to provide insight into where future investments should be made if the United

States is to protect its increasingly important space-based assets and retain its position as a global leader able to project military power wherever necessary.

1999. 130 pages. Public release.

P-10 ISBN 1-58566-070-1 \$9.00



This is an Air University Press series of substantive essays considered too short for publication as monographs but too lengthy to be journal articles. The series is named for Gen Muir S. Fairchild, first commander of Air University and widely regarded as its conceptual father.



The Vital Link: The Tanker's Role in Winning America's Wars

David M. Cohen

This paper focuses on the unique and vital capabilities of the US Air Force's KC-135 tanker fleet. It analyzes historic and current tanker usage, tanker operational employment, and the capability of today's tanker fleet, with emphasis on force structure and force management. In light of decreasing budget, aging airframes, increased downtime for maintenance, and an explosion in the operations tempo, this paper proposes a four-pronged methodology addressing tanker vision, organization, training, and employment, as the correction needed to get the KC-135 weapon system back on centerline. This will allow the tanker to effectively aid the Air Force in successfully deterring conflict and if needed, quickly win the nation's future wars.

2001. 67 pages. Public release.

P-16 ISBN 1-58566-088-4 \$6.50



Endgame in the Pacific: Complexity, Strategy, and the B-29

G. Scott Gorman

Maj Gorman examines the problems encountered by XX and XXI Bomber Commands in employing the B-29 against Japan, initially from India and China, later from the Marianas. The technologically advanced bomber was expected to be the technological solution to attacking Japan across long distances. XX and XXI commands, however, found that employing the big bomber was not as simple as planners had hoped. Their problems included technological malfunctions, doctrinal shortcomings, and unintended consequences.

2000. 80 pages. Public release.

P-7 ISBN 1-58566-075-2 \$5.50



Military Resistance to Humanitarian War in Kosovo and Beyond: An Ideological Explanation

Kenneth R. Rizer

Major Rizer explains why the Pentagon opposed war in Kosovo and why it will likely oppose future such humanitarian wars. He further explains how the joint chief's resistance to intervening militarily in Kosovo was based on the US military's worldview. This paper shows that the US military holds an institutional philosophy of conservative realism. Major Rizer concludes that this military philosophy is unlikely to change in the short term, that it will continue to strain relations with liberal administrations, and that it ultimately helps prevent cavalier uses of American military power.

2000. 64 pages. Public release.

P-15 ISBN 1-58566-086-8 \$5.50



RESEARCH REPORTS

Special research studies on issues and problems of particular interest to Air Force commands and agencies. The authors were assigned on a temporary basis from MAJCOMs to CADRE's Airpower Research Institute. This program ended in 1994.

Rapid Space Force Reconstitution Mandate for United States Security

Jeffrey L. Caton

Major Caton analyzes the increasing threat posed by proliferating technology and its implications for our space systems. He identifies the need to develop rapid launch capabilities to reconstitute space forces (rapid space force reconstitution [RASFOR] systems) to ensure that responsive and flexible space support is always available. Major Caton challenges some of the traditional approaches to space lift and recommends the use of a different class of launch vehicles.

1994. 96 pages. Public release.

R-8

\$8.50

Making Operational Support Airlift Ready for War

David D. Dyche

Colonel Dyche defines operational support airlift's (OSA) wartime roles and missions. He traces OSA's roots from World War I up to consolidation under the Military Airlift Command (MAC) in 1975. He discusses organizational changes over the past 20 years. How should OSA be organized, trained, and equipped in peacetime to meet its wartime mission? Answering that question is central to Colonel Dyche's study. He recommends reorganization, better training, new mentality, modern equipment, and a new name—combat operations support airlift (COSA). Colonel Dyche argues the need for Air Force OSA to change soon. If the proposed changes are made in peacetime today, COSA will be ready for war.

1995. 255 pages. Public release.

R-11

\$20.00

Combat Search & Rescue: CSEL Enhancements for Winning Air Campaigns

Joseph J. Falzone

Major Falzone traces the evolution of Air Force rescue operations and briefly analyzes communication problems that faced survivors in past air campaigns. He compares combat search and rescue in Vietnam and Operation Desert Storm.

His focus on a combat survivor evader locator (CSEL) device covers the shortfalls of survival radios and illustrates how this new radio can benefit personnel who need rescue services.

1994. 80 pages. Public release.

R-18

\$6.50

Total Force Policy and the FIGHTER FORCE

Daniel L. Gladman

Colonel Gladman reviews the evolution of the DOD total force concept and the historical role that reserve forces have had in meeting national security requirements. He discusses legislation and political influences that affected the debate over the role of active, reserve, and guard forces in the total fighter mix. Colonel Gladman concludes that the fighter force in the twenty-first century will be rapidly deployable, CONUS-based, cost-effective, and politically shaped and motivated. He argues that the associate concept used in the airlift and air refueling communities offers a feasible solution for the fighter force.

1995. 66 pages. Public release.

R-1

\$5.50

Command and Control Warfare: Putting Another Tool in the War-Fighter's Data Base

Norman B. Hutcherson

Colonel Hutcherson argues that the US armed forces must develop a strategic mix for decision makers at each level of war that provides the information they need, at the time and place they want it, and in a format they can use. He describes the background and development of command and control warfare (C²W) and points out its importance on and off the battlefield. Colonel Hutcherson looks at operations security, electronic warfare, physical destruction, psychological operations, and military deception and warns the war fighter against relying solely on the present C²W construct of only these five pillars. He recommends that as new techniques or capabilities are developed and perfected, they should also be added to keep command and control warfare a viable warrior's tool.

1994. 82 pages. Public release.

R-28

\$7.00

**Grand Strategy for Information Age
National Security: Information
Assurance for the Twenty-first
Century**

Kevin J. Kennedy, Bruce M. Lawlor,
and Arne J. Nelson

The authors define *grand strategy* as the art and science of developing and using the political and economic powers of a nation, together with its armed forces, during peace and war, to further national interests, priorities, and policies. Military strategy is a subset of grand strategy. The authors believe that a reexamination of grand strategy is essential in the Information Age because future enemies are likely to avoid attacking US defense forces directly. Instead they will focus on undermining US national will to fight by exploiting its reliance on information systems, present to technological vulnerability and democratic methods of governing. The authors offer specific recommendations for coping with Information Age threats to our national security.

1997. 100 pages. Public release.

R-30

\$8.00

**Foreign Internal Defense: Does Air
Force Special Operations Have
What It Takes?**

Michael C. Koster

Major Koster explores whether the Air Force Special Operations Command has the necessary capability to conduct air operations in the third world to train and advise host air force units as opposed to conducting operations using aircraft specifically adapted for use by special operations forces. He examines and defines foreign internal defense as a mission, analyzes and describes the conditions in most third world countries with a focus on operational considerations, and describes the types and capabilities of aircraft platforms required for this mission. Major Koster concludes with the observation that the Air Force must quit debating organizational structures and begin creating actual forces to carry out the mission.

1993. 131 pages. Public release.

R-5

\$10.00

**Mobilizing the Air National Guard
for the Persian Gulf War:
Lessons and New Directions**

James E. Lightfoot, ANG

Colonel Lightfoot focuses on the problems associated with mobilization. He begins with an analysis of the Guard and describes historical precedents and reasons that help explain the causes for these problems. Colonel Lightfoot notes that the Guard was effective in Operations Desert Shield/Storm, but he cautions that management must reassess and improve the Guard's methods of doing business if it is to be retained as a part of the force structure in an era of a shrinking defense budget.

1994. 166 pages. Public release.

R-15

\$14.00

**LEO on the Cheap: Methods for
Achieving Drastic Reductions in
Space Launch Costs**

John R. London III

Colonel London identifies and discusses the reasons for excessive costs in launching US spacecraft. He describes and compares various types of launch vehicles, gives a brief history, and cites the advantages and disadvantages of each. He compares and contrasts the traditional and typical approaches to space launch between the US and the former Soviet Union. Colonel London offers several recommendations to significantly reduce launch costs.

1994. 242 pages. Public release.

R-26

\$19.00

**Role of Unmanned Aerial Vehicles:
In Future Armed Conflict Scenarios**

Dana A. Longino

Colonel Longino assesses the success of unmanned aerial vehicles (UAV) in combat during the last 25 years. He contends that the UAV is just one more tool for commanders in the field to use in gaining information on enemy activity. Colonel Longino discusses the capabilities of UAVs and how they can fill a void in photoreconnaissance, a lesson of Operation Desert Storm.

1994. 50 pages. Public release.

R-19

\$4.25

The New Sword: A Theory of Space Combat Power

Michael R. Mantz

Colonel Mantz examines the emerging significance of space combat and three mission areas—space denial, space strike, and space protection. He proposes a set of space combat power axioms that he integrates into a preliminary theory of space combat power. He argues that space is a military medium that the US has not sought to exploit for political and financial reasons. He views space combat power and airpower as independent. Presently the US lacks both capabilities and the will to become a space combat power.

1995. 102 pages. Public release.

R-14

\$8.50

Space Doctrine for the Twenty-first Century

Robert D. Newberry

Major Newberry attempts to define a doctrine-development process and use it to formulate a space doctrine. He states that there is virtually no approved joint or service space doctrine and no approved process from which the needed doctrine can be developed. Newberry begins his discussion with a review of existing doctrinal publications and their treatment of space power. The discussion proceeds with a description of space policy and shows how policy has been substituted for doctrine. Next it recommends a doctrine-development process that highlights the absence of a space-power theory. Finally, it proposes and uses a space-power theory to derive doctrine. Newberry's theory includes the tenets of space power, the operational art of space warfare, and implementation strategies for space forces. Major Newberry believes that a doctrine derived in this fashion can be immediately applied to ongoing space operations.

1998. 80 pages. Public release.

R-31

\$11.00

When It's Over "Over There": Deep-Strike Air-to-Ground Training for the 2000s

Jonathan C. Noetzel

Major Noetzel focuses on the need for training in environments that will duplicate probable

conditions of future military actions. He identifies geographic training areas and examines them for similarities and differences with likely trouble spots around the world. Only by periodic training in these differing climates will flight and support crews be ready to go when called. Major Noetzel makes specific recommendations to achieve this readiness training.

1992. 52 pages. Public release.

R-81

\$4.00

Air Force Recruiting: Considerations for Increasing the Proportion of Black and Hispanic Persons in the Enlisted Force

Martin W. Pellum

Major Pellum examines the Air Force minority recruitment program for enlisted members. He notes that if the Air Force reflects America's strength, its members reflect America's people. Minority representation in the armed forces has been and likely will continue to be a political topic of debate as the entire country grapples with issues of fairness and equal opportunity amid changes in the nature of work and in America's workforce. He identifies several significant factors to consider in developing a synergistic recruiting program aimed at accessioning blacks and Hispanics not only with the qualities needed to successfully perform increasingly complex job tasks, but also in the numbers representative of society. Not intended to outline step-by-step procedures nor reveal the solutions to all the problems, this study highlights the issues and is written to appeal to a wide-ranging audience.

1996. 62 pages. Public release.

R-21

\$5.50

Cockpit Video: A Low-Cost BDA Source

Kevin Smith

Colonel Smith analyzes the record of Desert Storm and concludes that battle damage assessment from traditional intelligence sources was severely lacking. Tactical field commanders received neither timely nor reliable bomb damage assessments. Normal intelligence channels

had failed to develop techniques to assess the effectiveness of new weapons technologies such as cluster munitions, and the bureaucratic layering of intelligence source prevented battlefield and theater commanders from having control of and access to intelligence resources. Colonel Smith argues that onboard videos provided the best, most reliable intelligence to tactical commanders. He recommends that all strike aircraft be equipped with onboard BDA capabilities such as cockpit video.

1993. 97 pages. Public release.

R-6

\$8.50

Restructuring the Air Operations Center: A Defense of Orthodoxy

David Tillotson III

Colonel Tillotson reviews the underlying structure and operational requirements of a theater air component. He examines the current structure and functions of the Air Force components that have evolved to meet those needs. He assesses the performance of the theater air control system (TACS) during the Just Cause and Desert Shield/Storm operations. Colonel Tillotson concludes that while the TACS can be streamlined, the fundamental structure is sound.

1993. 96 pages. Public release.

R-56

\$7.50

Global Power through Tactical Flexibility: Rapid Deployable Space Units

Thomas A. Torgerson

Future US military space systems will have to provide the capability to respond to growing regional threats throughout the world. Major Torgerson recommends an approach to increase the utility of space systems across the spectrum of conflict. He identifies specific applications for space systems and examines staffing, organizational cost and acquisition issues.

1994. 80 pages. Public release.

R-3

\$6.50

The Conventional Bomber Force War-Horses for Global Conflicts

V. Frank Vollmar

Colonel Vollmar questions whether the current conventional bomber force is adequately organized, equipped, and modernized to meet basic security needs and project power in the post-cold war era. He assesses the use of the conventional bomber in several conflicts and exercises and analyzes the capabilities of this force (B-52s, B-1s, and B-2s). He concludes that the present conventional bomber force is powerful but requires modifications to keep pace with world political changes. Colonel Vollmar offers recommendations and solutions to increase the bombers' capabilities in conventional warfare.

1992. 112 pages. Public release.

R-83

\$23.00

Teaching Excellence: Methodologies to Assess Teaching Effectiveness

Steven G. Webb

Major Webb examines the issues associated with assessing the networked classroom system at the US Air Force Academy. He reviews and compares teaching technologies and styles. Major Webb proposes guidelines and outlines principles to follow in developing a method to evaluate the effectiveness of innovative education technologies at the Air Force Academy. He uses the undergraduate engineering course as a case study.

1994. 172 pages. Public release.

R-9

\$15.00

Operational Test and Evaluation of Electronic Combat Systems

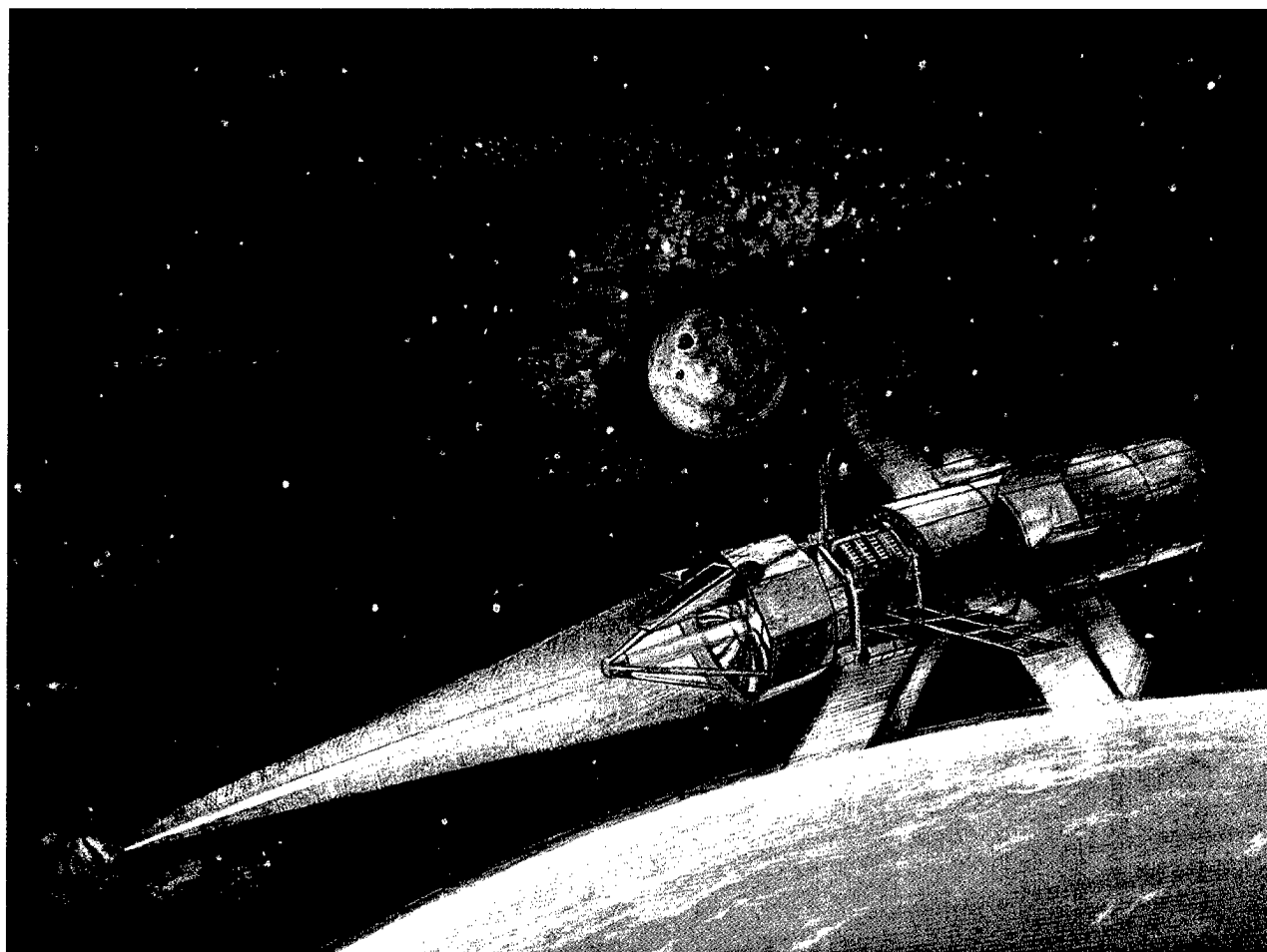
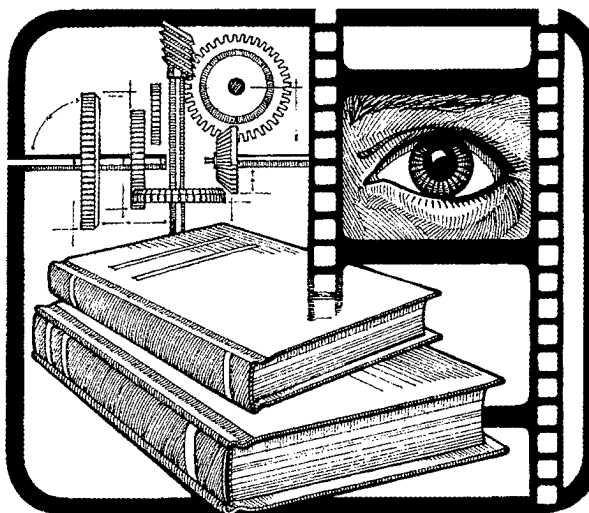
Frederick L. Wright

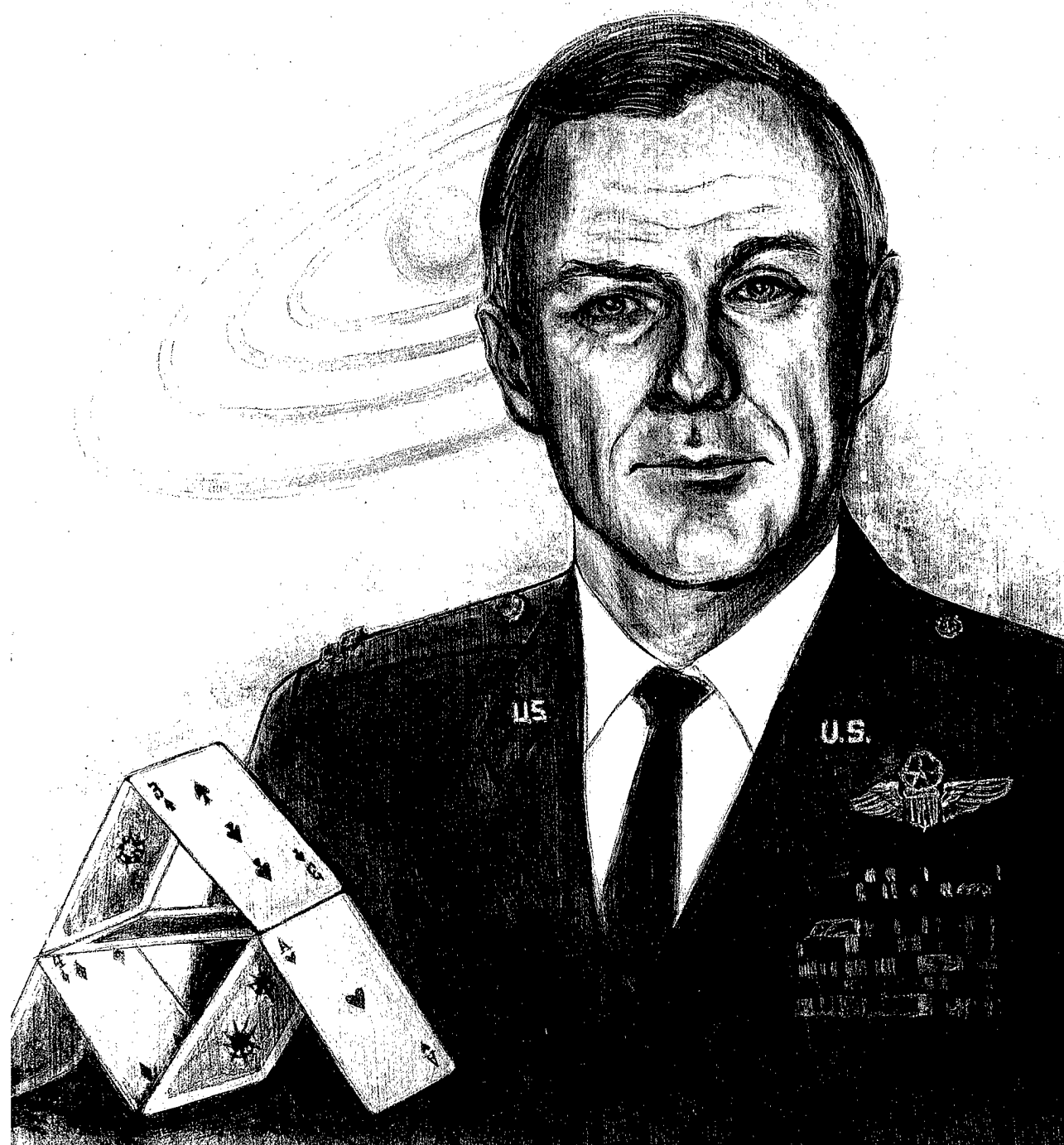
Major Wright designs a test process that puts discipline and structure into the operational test and evaluation of electronic combat systems. He traces the causes of the problems in the present systems process. He discusses those limitations and challenges and describes how to apply a scientific test process to correct the test-fix-test approach that predominated during the cold-war era.

1993. 122 pages. Public release.

R-22

\$9.50





STUDENT THESES

Student theses submitted to the faculty of the School of Advanced Airpower Studies(SAAS), Maxwell AFB, Alabama. SAAS enhances the abilities of selected graduates of intermediate service PME schools to develop sound airpower doctrine and apply the principles of that doctrine successfully. You can access an unedited version of various SAAS theses at <http://www.au.af.mil/au/saas/studrsch/class.htm>.

Strategic Paralysis: An Airpower Theory for the Present

Jason Barlow

Major Barlow proposes an independent strategy for applying airpower to change the behavior of the opposing forces government. he author rejects the Clausewitzian concept of strategic centers of gravity as ambiguous and static. Major Barlow asserts that this notion leads military planners in a futile search for a single target that, if destroyed, will cause the defeat of the enemy. He substitutes an approach to strategic targeting that is based on the national elements of value (NEV) model. This model recognizes the interaction of key elements of society; leadership, industry, armed forces, population, transportation, communication, and alliances. By successfully targeting and destroying the enemy's NEVs, the US will cause strategic paralysis and thus defeat the enemy's ability and will to continue the fight. Major Barlow concludes that strategic paralysis should form the basis for airpower strategy in the future.

1994. 99 pages. Public release

T-15

\$10.00

Bombs over Bosnia: The Role of Airpower in Bosnia-Herzegovina

Michael O. Beale

Major Beale examines the role operations Deny Flight and Deliberate Force played in achieving a peaceful settlement to ethnic conflict in Bosnia-Herzegovina in the early 1990s. To help the reader understand the role Deny Flight and Deliberate Force played in getting a peace agreement signed, the author explains the political and historical context of the war in Bosnia-Herzegovina. While Deny Flight was generally ineffective in its mission, Deliberate Force was, in the words of US Secretary of Defense William Perry, "the absolutely crucial step in bringing the warring parties to the negotiating table at Dayton, leading to the peace agreement."

1997. 71 pages. Public release.

T-13

\$6.00



Bedding Down with C-O-T-S: Leveraging Commercial Industry to Solve the Strategic Airlift

Christopher J. Bence

Major Bence examines the feasibility for the United States Air Force (USAF) to obtain and field a commercial off-the-shelf (COTS) cargo aircraft in order to meet the current and future airlift requirements of the United States. He discusses the current capacity, the three types of cargo, and the total force structure of the USAF. Major Bence offers five alternatives, including COTS—each embraces benefits and drawbacks—to increase airlift capacity.

2000. 80 pages. Public release.

T-7

\$9.50

Transport Bombers: A Conceptual Shift in Precision- Guided Munitions Delivery

Bryan J. Benson

In this study Major Benson addresses the shortfall in bomber and transport capabilities necessary to execute the two major regional contingencies called for in the president's national security strategy. He examines in depth the development of transport bombers as one option in the search for a solution to this shortfall. Major Benson focuses on operational utility, technological assessment, and budgetary and operational considerations involved with the transport-bomber option.

1996. 56 pages. Public release.

T-4

\$6.00

The Transportation Balance: A Study of the Transportation Budgeting Process

Michael D. Cassidy

Major Cassidy analyzes the way the Department of Defense currently funds the Defense Transportation System (DTS). His

study continues with an analysis of the current process used to support the balance of this DTS. This analysis includes a study of the Planning, Programming and Budgeting System (PPBS) from both the Navy and Air Force perspective and the impact this system has on the transportation system. After the study of the PPBS, it describes the Joint Oversight Council and its influence on the DTS. This study concludes that the proposed process could more effectively support the DTS balance than the current process and addresses several of the major implications of this policy change.

1996. 66 pages. Public release.

T-5

\$8.50

Mines Away! The Significance of US Army Air Forces Minelaying in World War II

John S. Chilstrom

Major Chilstrom reviews the history of mine warfare and describes the use of mines during World War II. He focuses on how aerial minelaying became one of the most successful maritime missions of the Army Air Forces (AAF). He argues that the B-29 minelaying in the Pacific demonstrated the flexibility of airpower, which exposed the AAF to a traditional naval mission—sea control. Major Chilstrom concludes that mines are important, flexible, effective weapons, and that minelaying is a viable function of airpower.

1993. 62 pages. Public release.

T-11

\$5.00

Doctrine Matures through a Storm: An Analysis of the New Air Force Manual 1-1

Kurt A. Cichowski

Colonel Cichowski analyzes the new Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*. He traces the heritage of aerospace power and examines the history and theory behind the evolution of Air Force doctrine. He discusses aerospace doctrine as defined in AFM 1-1 (March 1992) in light of the experience of Operation Desert Storm. Colonel Cichowski concludes that while it is weak on some points, the new version pro-

vides a sound doctrinal basis for the development of joint aerospace doctrine.

1993. 68 pages. Public release.

T-10

\$5.50

Keeping the Peace: Regional Organizations and Peacekeeping

John S. Clark Jr.

Major Clark examines two peacekeeping operations: the Organization American States (OAS) intervention in the Dominican Republic in 1965, including its involvement in the Central American peace process in the late 1980s and the Economic Community of West African States (ECOWAS) intervention in Liberia in 1990 to the present. He states that the OAS participation in the Central American peace process, in conjunction with the United Nations (UN), demonstrates what can be accomplished when the conditions for peace are facilitated by peacekeepers. Major Clark indicates that perhaps the single-minded focus on the UN as the vehicle for peaceful resolution of conflict may have caused the international community to overlook the potential of regional organizations. He submits that regionals are not the right vehicle for peacekeeping in every situation. But Major Clark recommends that DOD and other US agencies should support and encourage regional organizations to bear more of the peacekeeping burden, either independently or as a partner with the UN.

1997. 68 pages. Public release.

T-35

\$8.00



Higher Eyes in the Sky: The Feasibility of Moving AWACS and JSTARS

Functions into Space

Kimberly M. Corcoran

Major Corcoran reviews the development of and operational need for airborne early warning systems. In her study she provides a brief overview of space operations but focuses on the technical challenges of migrating surveillance functions into space. Major Corcoran argues that a basic understanding of space vehicles and their operations is a prerequisite to understanding how the migration of AWACS and JSTARS functions to space could occur. Attention is given to the

organizations involved in the nation's space program and how each may affect the development of a space-based surveillance system. Major Corcoran examines issues that will need to be resolved as we migrate from airborne surveillance functions into space.

2000. 63 pages. Public release.

T-53

\$9.00

A Matter of Trust: Close Air Support Apportionment and Allocation for Operational Level Effects

Peter A. Costello III

Major Costello reviews the history of close air support (CAS) since World War II to show how it has been apportioned and allocated in the past. He examines the current joint air operations process and two theories of the use of CAS at the operational level. He observes that the current system, rooted in its historical past, does not fully employ CAS to its optimum potential. However, his theory is that CAS should be used to isolate and demoralize the enemy. Major Costello recommends changes to the view of CAS and the process for its apportionment and allocation. Its application should be coordinated beginning at the operational level and down to the tactical, not vice versa.

1997. 80 pages. Public release.

T-34

\$6.50



United States Air Force Lessons in Counterinsurgency: Exposing Voids in Doctrinal Guidance

John W. Doucette

Major Doucette addresses how insurgent warfare is fundamentally different from conventional wars. Two questions are germane: What are the major problems counterinsurgency (COIN) operations present airmen? And does doctrine provide appropriate guidance to overcome these problems? He examines the experiences of US airmen in combating insurgencies and contrasts current COIN doctrine with reality. Major Doucette also examines the adequacy of US Air Force and joint doctrine for COIN operations. He provides conclusions and recommendations for changes to current doc-

trine based on the comparisons of actual events and guidance available today.

2000. 64 pages. Public release.

T-6

\$8.00

John Boyd and John Warden: Air Power's Quest for Strategic Paralysis

David S. Fadok

Colonels John Boyd and John Warden have contributed to the evolution of airpower theory through their respective works on strategic paralysis.

Boyd's thoughts on strategic paralysis are process-oriented and aim at psychological incapacitation. He speaks of folding an opponent back inside himself by operating inside his observation-orientation-decision-action (OODA) loop. His theory of conflict is Clausewitzian, emphasizing the mental and moral spheres of conflict, and he considers it important to teach the genius of war. Major Fadok describes Warden's theory as form-oriented and aiming at physical paralysis. This theory is Jominian in the sense that it is important to teach warriors how to act—that is, to teach the principles of war. Major Fadok concludes that strategic paralysis theory has moved from an early emphasis on targeting war-supporting industry to a current emphasis on war-supporting command to a future emphasis on war-supporting information.

1995. 56 pages. Public release.

T-29

\$5.50

Green and Blue in the Wild Blue: An Examination of the Evolution of Army and Air Force Airpower Thinking and Doctrine since the Vietnam War

Robert J. Hamilton

Major Hamilton examines the nature and degree of the convergence of the United States Army and Air Force airpower thinking and doctrine since the Vietnam War. His study is concerned only with airpower and does not incorporate theories or doctrine that deal with the space medium. He excludes Navy and Marine airpower theories. Major Hamilton discusses thinking on airpower in Vietnam, Army airpower

thinking from 1972 to 1992, and USAF thinking on airpower from that same time frame. He concludes that the Army and Air Force have a long track record of cooperation, and that areas of conceptual agreement exist from which to build a comprehensive theory of airpower.

1999. 51 pages. Public release.

T-41

\$5.50

The Counterair Companion: A Short Guide to Air Superiority for Joint Force Commanders

James M. Holmes

Air Supremacy has provided our surface, sea, and air forces the freedom to operate without fear of significant enemy surveillance or interference. With air supremacy, nothing is impossible. Major Holmes analyzes service and joint counterair doctrine, examines the counterair strategy process, discusses counterair force options, describes current interservice issues and uses service visions of war to show why counterair forces will continue to play a critical role in American joint operations. Integrating services will require a common counterair doctrine, a timely modernization plan that stresses service capability and joint compatibility, and continuous joint training. The success of this integration process will also depend on how well joint force commanders understand and direct the counterair process.

1995. 76 pages. Public release.

T-32

\$7.00

Coalition Warfare: Considerations for the Air Component Commander

Peter C. Hunt

This thesis examines the integration of coalition forces during several major conflicts of the twentieth century: the Korean War (1950-53), the Persian Gulf War (1990-91), and the Balkan Air Campaign (1992-95). It reveals the fundamental question, How are air component commanders being trained to respond to nuances of coalition warfare? The current US programs to train joint force air component commanders and operational-level staffs show promising trends for improving our ability to

operate within a coalition. This thesis brings to light several coalition considerations through the analysis of the three conflicts and offers valuable insight for future strategists.

1998. 75 pages. Public release.

T-31

\$8.50

Taking Down Telecommunications

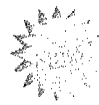
Gerald A. Hust

Major Hust examines the vulnerabilities of national telecommunications systems to lethal and nonlethal attacks. Because information is an essential element of combat capabilities, he argues that we must develop a thorough understanding of telecommunications and how best to exploit them across the spectrum of conflict. He recommends pursuing a strong research and development program to acquire nonlethal technologies with which to attack and disable or disrupt enemy telecommunications.

1994. 76 pages. Public release.

T-17

\$7.00



Sustained Coercive Air Presence (SCAP): Provide Comfort, Deny Flight, and the Future of Airpower in Peace Enforcement

George D. Kramlinger

Major Kramlinger examines the theoretical, historical, operational, and technological aspects of Sustained Coercive Air Presence (SCAP) and illustrates how air operations over Iraq and Bosnia demonstrated the problems associated with a long-term air presence and suggest the need for doctrine that adapts combat airpower to the SCAP mission. He focuses on the determination of the mechanisms, strengths, and limitations of how combat airpower can persuade determined belligerents to stop fighting and then maintain a secure environment to facilitate the continuing diplomatic process.

2000. 78 pages. Public release.

T-26

\$8.50

From Theater Missile Defense to Antimissile Offensive Actions: A Near-term Strategic Approach for the USAF

Merrick E. Krause

Major Krause's basic question: What strategic approach *should* the United States Air Force take toward theater missile defense (TMD) and antimissile offensive actions in the near term? He addresses current and planned key TMD systems by answering another question, Is there a current threat and what is it? His methodological approach involves historical and literature reviews, interviews, and a qualitative comparison of current and proposed weapons systems capabilities and doctrine. He explores key events and policies between Operation Crossbow and today. Major Krause recommends that USAF near-term attack operations and battle management command, control, communications, computers, and intelligence integration should be considered as part of a greater air and space power antimissile offensive counterair effort, not simply an adjunct to a surface-force-centric TMD paradigm.

1999. 78 pages. Public release.

T-48

\$5.50

Lt Gen Ned Almond, USA: A Ground Commander's Conflicting with Airmen over CAS Doctrine and Employment

Michael Lewis

Major Lewis examines the long-running dispute between the Army and the Air Force over the effective employment of airpower for close air support (CAS) of ground forces. He focuses on four main issues: priorities in the employment of airpower; ownership and apportionment of tactical air assets; command and control; and the single or multipurpose aircraft debate. Major Lewis discusses the evolution of Lt Gen Edward "Ned" Mallory Almond's views, thoughts, and actions from World War II through the Korean War because the central issues he identified remain the focus of the debate today.

1997. 112 pages. Public release.

T-22

\$11.00



Eliminating the Rhetoric: An Evaluation of the Halt-Phase Strategy

Mark C. Nowland

Major Nowland identifies criteria that will provide objective analysis of a halt-phase strategy. He examines air combat in three operations: the Battle of Bismarck Sea, the 1973 Golan Heights battles of the Yom Kippur War, and the Iraqi Republican Guard escape from Basra. His study consists of three sections: assessment of prehostility preparation, examination of actual combat operations, and analysis of the results of the operation. Major Nowland concludes with three major lessons.

2000. 88 pages. Public release.

T-12

\$11.00



A Kill Is a Kill: Asymmetrically Attacking United States Airpower

Michael A. O'Halloran

Major O'Halloran examines some likely asymmetric responses to US airpower at three levels of war: political (strategic), operational, and tactical. He also examines whether the United States has adequately prepared itself to counter asymmetrical measures against its airpower assets. He addresses a range of asymmetric threats as experienced from the president to the private citizen. Major O'Halloran concludes that US airpower is not likely to overwhelm technological capability by increasing friction levels and changing our visions of surgical warfare into an attrition reality.

2000. 70 pages. Public release.

T-9

\$9.00

Concepts of Operations for a Reusable Launch Vehicle

Michael A. Rampino

Major Rampino analyzes the potential value of reusable launch vehicles (RLV) to the US military, especially the Air Force. He discusses the factors that affect the development of such vehicles and viable concepts of operations. Major Rampino recommends that it is not too early for military air planners to think deeply about the implications

of operational RLVs for war-fighting strategy, force structure planning, training, and doctrine.

1997. 62 pages. Public release.

T-24

\$5.50



**Dead on Arrival? The
Development of the Aero-
space Concept, 1944-58**

Stephen M. Rothstein

Major Rothstein chronologically traces the historical development of the aerospace concept, from its initial inception in 1944 as it was embodied in the far-reaching vision of Gen Henry H. "Hap" Arnold, until its public appearance in 1958. He uncovers reasons why airmen came to see their primary area of responsibility differently than the rest of the nation and why their aerospace concept failed to win bureaucratic support. By tracing the aerospace concept's technological and intellectual development against a contextual backdrop of geopolitics, national security strategy, national space policy, interservice competition, and internal tensions within the Air Force, Major Rothstein offers historical lessons learned for today's planners seeking to move the Air Force toward an aerospace force.

2000. 102 pages. Public release.

T-25

\$13.00

**Falcons against the Jihad:
Israeli Airpower and Coercive
Diplomacy in Southern Lebanon**

Kenneth C. Schow Jr.

Colonel Schow discusses coercive diplomacy to deal with regional conflicts and the challenges they present. He submits that planners will have to look to the experiences of other air forces to help develop our own coercive strategies and that the Israeli Air Force (IAF) is an ideal candidate for this type of evaluation. This study covers the experiences of the IAF in Lebanon between January 1983 and June 1985.

1995. 50 pages. Public release.

T-40

\$5.50

**A Framework for Military
Decision Making under Risks**

James V. Schultz

Colonel Schultz assesses the application of prospect theory to military decision making. He compares and contrasts prospect theory with the expected utility theory and Allison's rational actor, organizational process, and political decision-making models. The author uses Eisenhower's decision to execute Operation Market Garden as a case study to apply the risk propensity framework. Colonel Schultz warns that prospect theory does not predict the choice decision makers will make but should reveal their tendencies to follow risk seeking or risk averse courses of action.

1997. 53 pages. Public release.

T-16

\$7.50



**Vital Interests, Virtual
Threats: Reconciling
International Law with
Information Warfare and United
States Security**

Karl J. Shawhan

Major Shawhan examines the history of technology and sovereignty and the advantages and disadvantages of the International Regime for Information Security (IRIS) model, which mirrors the sanctuary of a weapons-free outer space without limiting weapons proliferation. He discusses how the use of computer networks threatens the traditional understanding of national sovereignty. He examines how far advances in technology have outpaced the intent of the Charter of the United Nations regarding aggression and armed force. Major Shawhan proposes reasonable policy steps necessary to support national security in an information age and recommends the use of the IRIS model for a future international convention on information warfare.

2000. 74 pages. Public release.

T-14

\$9.50

Bombing to Surrender: The Contribution of Airpower to the Collapse of Italy, 1943

Philip A. Smith

Major Smith examines the contribution of airpower to the 1943 collapse of Italy. His study is largely about competing airpower strategies during World War II. He presents his own view of this 50-year-old debate. Major Smith does not offer another absolute ruling, nor does he represent a bias toward one form of employing airpower over another, but his study attempts to document an important exception to the most current panacea target. He cites several broad works—Robert A. Pape's *Bombing to Win: Airpower and Coercion in War*, the *United States Strategic Bombing Survey Reports*, Ernest R. May's "Lessons" of the Past: *The Use and Misuse of History in American Foreign Policy*, and Frederick William Deakin's *The Brutal Friendship: Mussolini, Hitler, and the Fall of Italian Fascism*—to identify examples where the psychological effects of airpower outweighed the physical damage caused by bombing.

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Attacking the Theater Mobile Ballistic-Missile Threat

David E. Snodgrass

Major Snodgrass reviews the performance of US offensive and defensive systems against Iraq's Scuds during Operation Desert Storm in 1991 and examines current US efforts to defeat these potentially destabilizing weapons. The danger of third world countries employing theater ballistic missiles has increased. Reflecting the realities of the new world order, theater missile defense is the first priority, and national missile defense is the second priority. Major Snodgrass covers the pros and cons of competing concepts to accomplish missile threat. This paper addresses how best to accomplish attack operations against the mobile ballistic missiles before they are launched. Using five basic criteria in his evaluation, he concludes that a multilayered approach, consisting of attack operations, active defense, passive defense, and a robust C³I network, forms the framework for the most effective mobile missile defense.

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Jeffrey L. Stephenson

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Linda E. Torrens

Major Torrens analyzes the impact that expansion and cooperation with the Partnership for Peace nations will have on NATO's tactical air doctrine. The end of the cold war diminishes the primacy of air superiority as a focus of NATO doctrine. To integrate former Warsaw Pact countries and military personnel, NATO will need to overcome the problems presented by nonstandard, outdated Soviet-made military hardware; ethnic, language, and cultural diversity of the former Warsaw Pact nations; and deeply ingrained, Soviet-based military philosophies. A second major challenge facing NATO is out-of-area operations. NATO will need to reshape its doctrine to meet these challenges.

1997. 47 pages. Public release.

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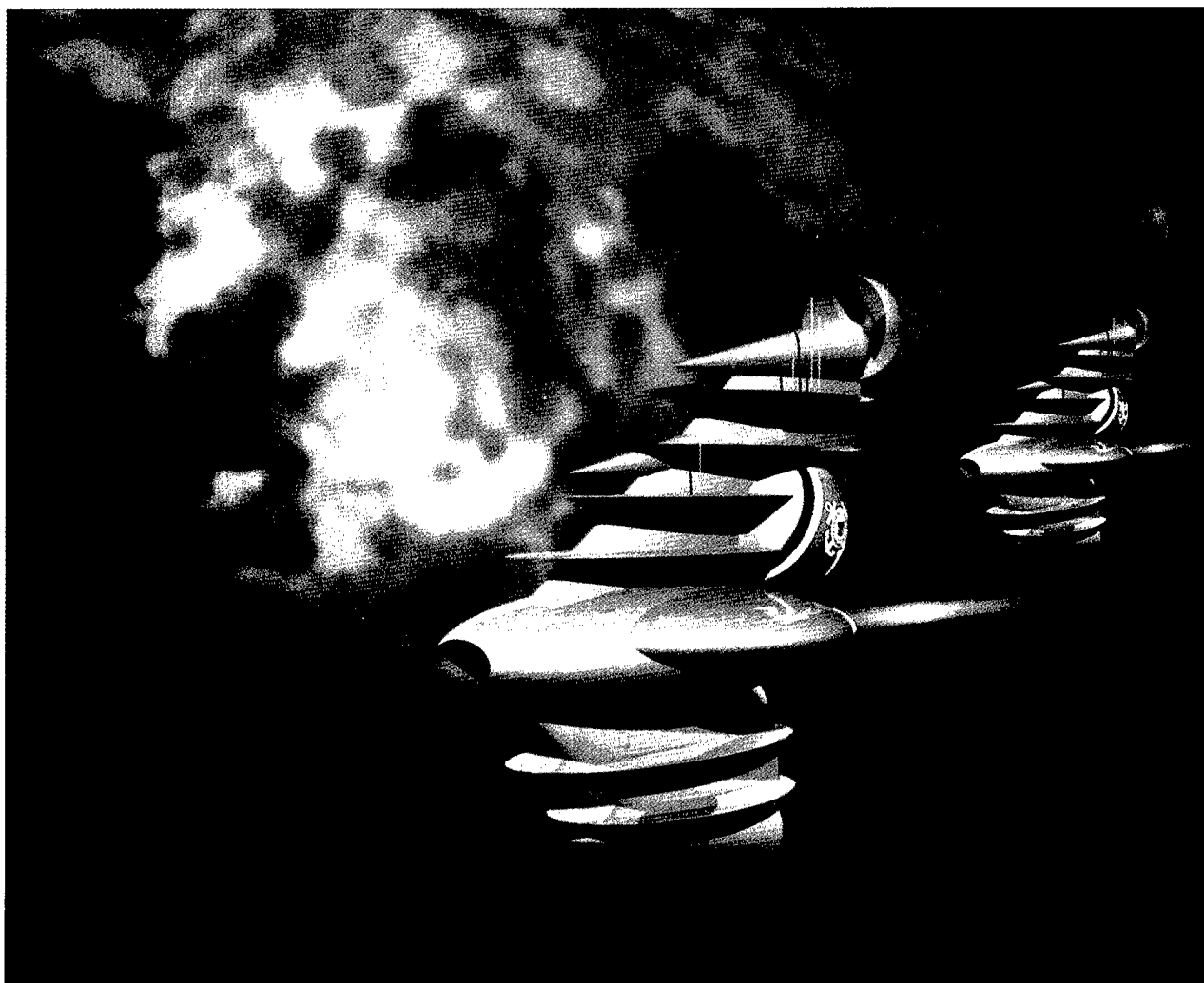
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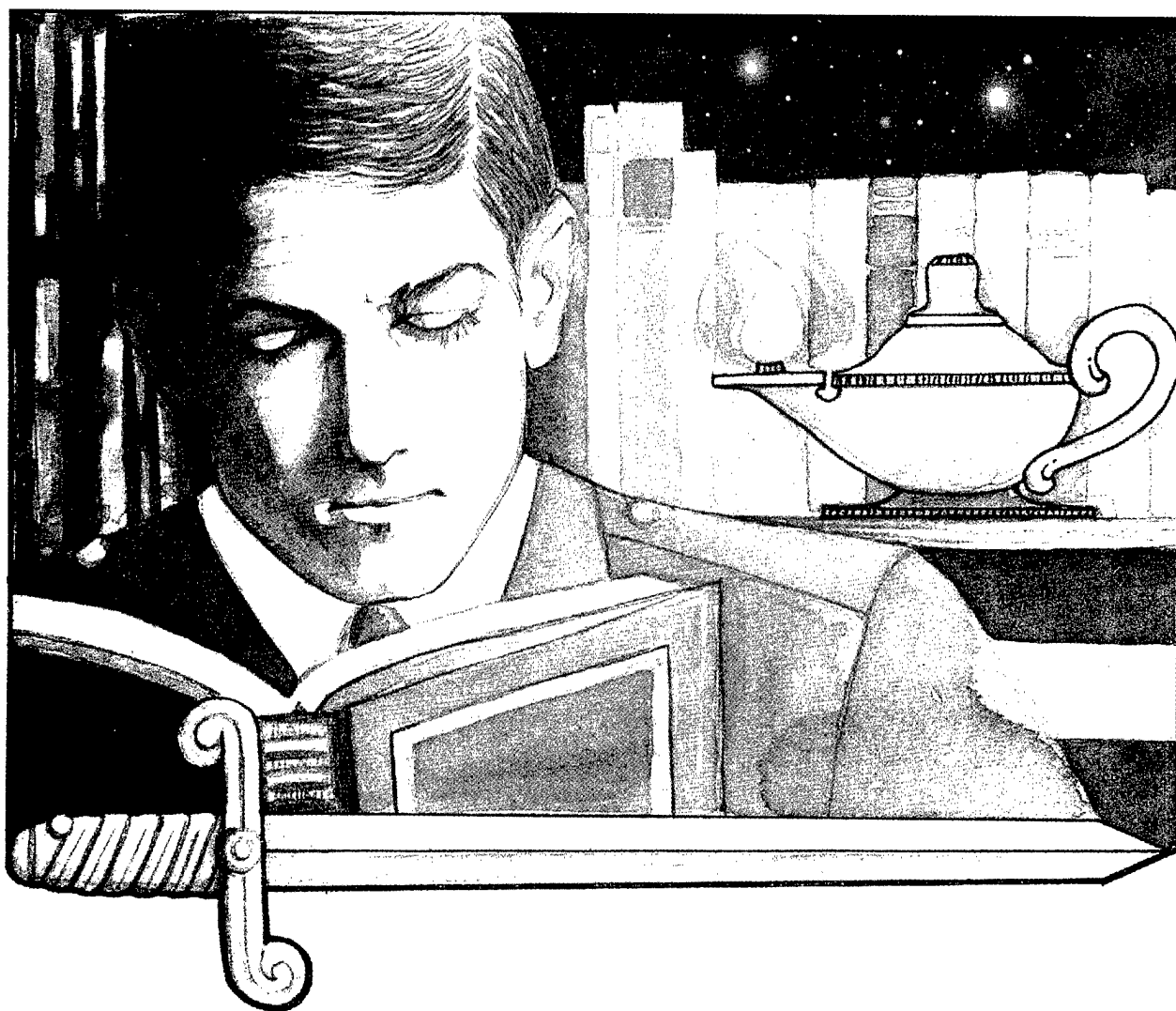
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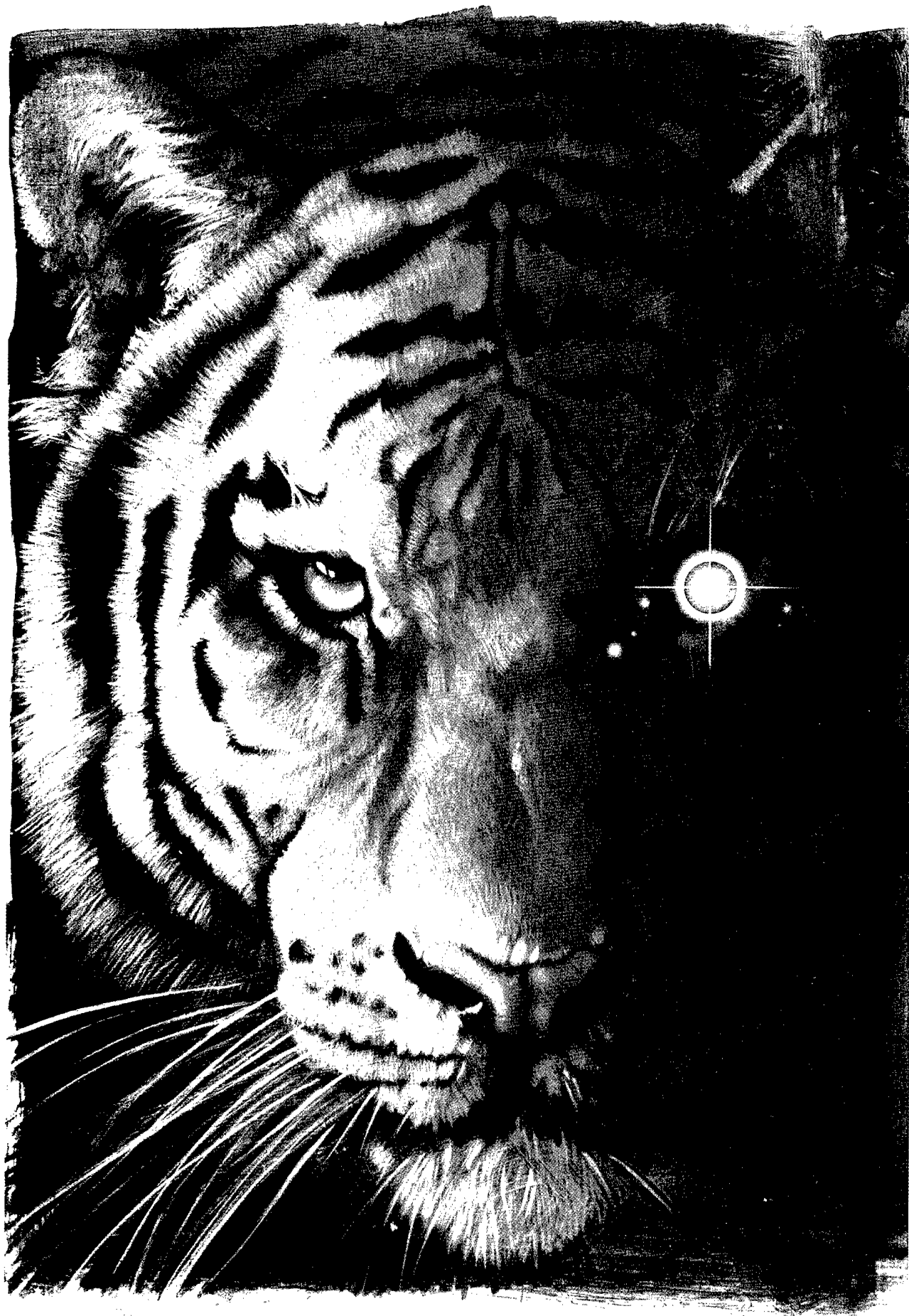
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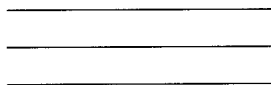
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